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The Journal of The Medical Association of Georgia

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Volume XXII

January-December, 1933

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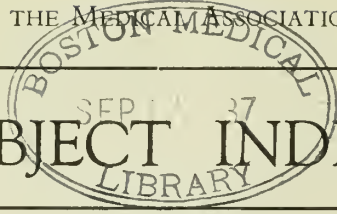
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COUNTIES REPORTING FOR 1934

Clayton-Fayette Counties Medical Society

The Clayton-Fayette Counties Medical Society announces the following officers for 1934:

President—J. R. Wallis, Lovejoy.

Secretary-Treasurer—T. J. Busey, Fayetteville.

Delegate—J. R. Wallis, Lovejoy.

Macon Medical Society (Bibb County)

The Macon Medical Society announces the following officers for 1934:

President—A. R. Rozar, Macon.

Vice-President—C. Hall Farmer, Macon.

Secretary-Treasurer—Leon D. Porch, Macon.

Delegate—Chas. C. Harrold, Macon.

Alternate Delegate—J. I. Hall, Macon.

Delegate—J. D. Applewhite, Macon.

Alternate Delegate—Chas. C. Hinton, Macon.

Censors: O. H. Weaver, J. D. Applewhite and Chas. C. Hinton.

Randolph County Medical Society

The Randolph County Medical Society announces the following officers for 1934:

President—F. M. Martin, Shellman.

Vice-President—F. S. Rogers, Coleman.

Secretary-Treasurer—G. Y. Moore, Cuthbert.

Delegate—W. G. Elliott, Cuthbert.

Censors—W. W. Binion, E. C. McCurdy and F. S. Rogers.

Carroll County Medical Society

The Carroll County Medical Society announces the following officers for 1934:

President—S. F. Scales, Carrollton.

Vice-President—H. J. Goodwin, Carrollton.

Secretary-Treasurer—D. S. Reese, Carrollton.

Delegate—T. M. Spruell, Temple.

Henry County Medical Society

The Henry County Medical Society announces the following officers for 1934:

President—R. L. Tye, McDonough.

Vice-President—J. W. Harper, Hampton.

Secretary-Treasurer—H. C. Ellis, McDonough.

Delegate—J. G. Smith, McDonough.

Alternate Delegate—R. L. Crawford, Locust Grove.

Glynn County Medical Society

The Glynn County Medical Society announces the following officers for 1934:

President—J. W. Simmons, Brunswick.

Vice-President—Webb Conn, Brunswick.

Secretary-Treasurer—T. V. Willis, Brunswick.

Delegate—L. W. Pierce, Brunswick.

Ware County Medical Society

The Ware County Medical Society announces the following officers for 1934:

President—A. W. DeLoach, Waycross.

Vice-President—W. C. Hafford, Waycross.

Secretary-Treasurer—K. McCullough, Waycross.

Delegate—W. F. Reavis, Waycross.

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA

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Volume XXII

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Number 1

SYMPOSIUM ON PEDIATRICS

RICKETS*

MERCER BLANCHARD, M.D.

Columbus

Rickets is prevalent in all of the temperate zones of the world. Every general practitioner or pediatrician should know the fundamental facts of the disease; its distribution, the recognition of its early symptoms, and both prophylactic and curative treatment.

Our knowledge of rickets has increased, and many of the time-honored theories in the textbooks are no longer tenable. Our conception of rickets has developed roughly in two periods, the first—which may be termed the pathological and clinical era—comprises the long span between 1650 and 1918, and the other—that of the newer rickets—embraces from 1918 until today. The latter period which is still in development, is an indirect result of the discovery of vitamins. Two discoveries have contributed to the knowledge of this newer rickets, neither of which has depended in any way upon the other. The first discovery emanated from the biological laboratory and consisted of a method of inducing rickets experimentally in animals, rendering it possible to study various aspects under conditions which are subject to exact control and modification. This technique made it possible for the first time to gauge the comparative etiological importance of faulty hygiene and diet. The second discovery following close on the heels of the first, was the discovery that the lack of ultra violet light plays a dominant role in the causation of rickets, and that it is a specific therapeutic agent for prophylaxis and for cure.

Up until these discoveries, rickets had awakened but a fitful interest in the clinicians—but has since been the object of intense investigation in this country and abroad.

Interest was further stimulated by the discovery that the ultra violet rays can also exert their remarkable action indirectly; that they can endow certain oils and foods with antirachitic properties. Later, it was shown that ergosterol could be activated to a remarkable degree. This knowledge not only made available new methods of therapy, but necessitated a revision of our conception of the chemical action of these rays.

As to the distribution of rickets throughout the United States, the accounts have been lacking in their uniformity. This is occasioned by lack of knowledge and care on the part of the physicians. During the present period of rickets, not only the clinical examination is better understood and interpreted, but we have added to this roentgenological examination of the bones and chemical tests of the blood.

In a paper published in 1921, Hess & Ungar wrote "Rickets is the most common nutritional disease occurring among the children of the temperate zone. Fully three-fourths of the children in the great cities, such as New York, show rachitic signs of some degree. These statistics were based mainly on clinical rather than laboratory examinations, more particularly on the presence of beading of the ribs. In 1922, these investigators reporting on the significance of clinical, radiographic, and chemical examinations in the diagnosis of infantile rickets, showed that when examinations were conducted in March, and laboratory as well as direct clinical methods were resorted to, rickets were found to be practically universal. There is little doubt that similar conditions exist

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throughout the eastern portion of the United States.

Elliott of New Haven reported that 83 per cent showed evidence of mild rickets by roentgen ray examination before 8 months of age; 6 per cent showed later. The total incidence of rickets in the demonstration group was 86 per cent. This high incidence was obtained even though chemical tests of the blood were not carried out.

There have been very few accounts of the distribution of rickets in the South, either among white or negro infants. Dubuys in 1924 gave an account of rickets in the city of New Orleans. His survey included 197 babies; 62 white and 135 colored; which were examined in March. He writes that according to clinical manifestations, rickets was present in every case in this study. The disease was more marked in the colored than in the white. When we bear in mind that this survey was purely clinical, carried out without the aid of refined laboratory tests, and that it included only breast-fed infants, it is clear that rickets must be almost as prevalent, although not as severe in the cities of the South as it is in those of the North.

In my experience, in Columbus, it has been my conviction for the past half dozen years that it was very exceptional to find any infants, without some clinical evidence of rickets. In February, of this year, I decided to get some data on a hundred infants ranging from three months to one year of age. These were infants seen by me for the first time, both in private practice and in a charity clinic. Seventy-five per cent showed unmistakable evidence of rickets, and about 15 per cent more were borderline cases. No x-ray pictures or blood chemistry were done. Some of the cases had had cod liver oil irregularly. The point I wish to make clear is that rickets is an every day affair in all of our practices, not the florid cases with the bowed legs and tremendous deformities, but those with enough change to classify them as typical rickets.

Although the etiology is not absolutely clear, it is much clearer than a decade ago. Rickets is distinguished by the remarkable number of factors which seem to play a part in its causation, and may be divided into

those that pre-dispose and those that actually give rise to the disorder, although this distinction cannot be sharply drawn. Undoubtedly there is a constitutional factor: All infants are not predisposed to rickets to the same degree. Premature infants are more susceptible than full term ones. The colored race is more susceptible than the white. In general rickets may be regarded as a disorder of the first and second years of life.

One of the most important predisposing factors is growth rate. Marasmic infants rarely develop rickets, where as the rapidly growing baby and more particularly the premature baby, which may show a growth rate twice that of the infant born at term, is with great difficulty prevented from developing rickets. The importance of growth is well illustrated in connection with cod liver oil for prophylaxis; rapidly growing babies require fully twice as much cod liver oil as those which are making small gains.

The diet is important in etiology. The very fact that there is such a marked difference in the incidence of rickets in breast fed and artificially fed infants compels this conclusion: The dominant etiological factor is lack of sunlight, a scientific truth which forms the hub of our new conception of rickets. Rickets varies inversely, both as to severity and incidence, with the quantity and quality of sunshine.

As to the symptomatology of rickets the signs of early rickets must be specifically searched for and will rarely be detected by routine observation or even in the course of careful general physical examination. Every physician will have to learn by experience to elicit the various signs; where and how to palpate the skull and the thorax and especially how to interpret the symptom complex which is incompletely developed. The earliest symptoms are restlessness, irritability and head sweating. The sweating is generally confined to the head and may lead to loss of hair over the occipital region, especially when it is accompanied by head rolling. A baby about 6 months of age suffering from early rickets is fairly well nourished and on casual examination, apparently healthy and normal. Closer investigation may reveal that the head is somewhat square, and the fon-

tanel too widely open, with the edges of the bones thin and yield too readily to pressure. Areas of cranial softness may be found posteriorly in the parietal bones adjacent to the lambdoid suture. Teething may be delayed, as well as the ability to sit or stand. Moderate enlargement of the costochondral junctions will be found. The musculature is poorly developed, rather than trophic. A radiograph may not show the typical cupping of the lower end of the ulna. A test of blood at this period generally reveals a lowered concentration of inorganic phosphates. In an infant which appears to be thriving, of average weight and of healthy appearance, it is evident that such slight deviations may readily be overlooked, unless specifically sought for.

The well developed or advance case presents an appearance which is recognizable at a glance. The head has become square and perhaps slightly enlarged. The thorax is deformed and shows two lateral rows of visibly enlarged costochondral junctions and perhaps a shallow horizontal groove traversing its lower part. The abdomen is large and protuberant, and constitutes the most striking feature of the infant, whose limbs at this time are more or less atrophic. The legs are bowed, and the posture may give evidence of laxity of the ligaments. Roentgenological examinations show characteristic involvement of the distal epiphysis of the radius and ulna, and the inorganic phosphorus of the blood is markedly reduced.

Craniotabes is as a rule the first sign of rickets and this can be elicited as early as a few weeks of age. The softening of the skull is detected by exerting pressure on the cranium with the tips of the fingers. A procedure which may find the bone indentable like parchment or like a celluloid or rubber ball, or may disclose merely one or more discrete areas hardly as large as the tips of the fingers.

The main alteration in the blood is a decrease in inorganic phosphorus. If the Bell-Doisy method is used, concentrations below 3.75 mg should be regarded as indicative of rickets, as the normal content is between 4 and 5. With the Tisdall method the figures range 1 mg higher. Radiographs of the epi-

physis are very interesting in rickets; the characteristic feature is the so-called cupping of the end of the metaphysis; a term which implies that its extremity becomes concave, instead of being flat or gently convex. This cupping or concavity grows deeper as the disorder progresses. The healing of the rachitic epiphysis is a striking phenomenon. In a moderate or marked case of rickets, following treatment with cod liver oil, activated ergosterol or ultra violet light; faint indications of healing may be noted in a week or ten days. The first signs of healing is the appearance of a faint shadow distal and almost parallel to the margin of the metaphysis. As healing progresses, this faint transverse shadow becomes increasingly dense and more definite and the whole bone shows denser calcification.

The treatment of rickets is both interesting and efficacious from both prophylactic and curative standpoints. To me, every infant has a potential case of rickets and I feel that it is my job to prevent its development. As we have noted, rickets often begin to develop in the first few weeks of life; we must begin our treatment early. There are three important agents which we have at hand, cod liver oil, irradiated ergosterol and sunlight (natural or artificial). It is my custom to start cod liver oil at about a week or ten days of age; dosage 15 mi. In about 10 days, this is given twice a day. The dosage is gradually increased until 3 teaspoons a day is given at 3 months of age. I frequently add a drop or two of ergosterol to each dose of cod liver oil. When the weather permits, sun baths are started, beginning with a few minutes a day and gradually increasing to half an hour. There is so much opposition on the part of the mothers to undressing the babies in cool weather, for fear of cold, that I begin just exposing the legs and face to the sun rays.

The curative treatment of rickets is the same as the prophylactic, only more active. Larger doses of cod liver oil or ergosterol are given and this is combined with treatment with mercury vapor lamp.

I wish to mention one word about various foods which have been activated. These

all act as adjuncts in the treatment. This is especially true of irradiated powdered milks.

Conclusions

1. Rickets is the most wide spread of all nutritional diseases.

2. It can be treated successfully, both prophylactically and curatively by cod liver oil, irradiated ergosterol and sunlight.

THE COMMON COLD*

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The so-called common cold is the most prevalent disease known to mankind. Economically it costs civilized nations billions of dollars annually. In its pernicious sequelae it swells morbidity and mortality rates to a disconcerting degree. It is equally dreaded by the mother of the new-born babe and the president of the large corporation. Unfortunately it possesses little or no dread for the average dweller on Main Street and therein rests one serious criticism of our profession and our allied health agencies. Some day we will tackle it seriously—by “we” I mean the human race. At present the problem it presents is diffidently approached even by the medical profession, and only ardently of late by the laboratory worker. What average individual with a severe cold thinks of the other fellow? Does the school teacher shun his classroom, the minister his Bible class, the movie fan his favorite palace, or even the hospital nurse her daily task, and the doctor his patient’s bedroom? The medical man has much to learn, then much preaching to do, before the ordinary human being, without being considered an alarmist, views the “neglected cold” as a curtain-raiser to the Dance of Death.

Since civilized man averages about two colds per unit per annum, I am assuming that we are all familiar with the symptoms of the common cold—but we really are not. Are you sure that your last attack was a common cold, or was it hay fever? Possibly you have vaso-motor rhinitis? Is your family tree decorated with the unpleasant fruit

of allergic phenomena? Have you sinusitis, polyps, nasal spurs, infected adenoids and tonsils, etc., ad infinitum? All these possibilities must be eliminated before one can claim the diagnosis of “common cold” to be correct.

And the expression “common cold” is just about as exactly scientific as the term “pestilential fevers” in the days of De Soto and Ponce de Leon. We do not know if the common cold has a common causative factor, or whether this causative factor varies from year to year, or season to season, or whether endemic influenza, epidemic influenza, and the common cold are protean forms of the same disease. Be that as it may, from the premature baby in its isolated room trying to escape death from infected mucous membranes to the octogenarian in Miami dodging the bronchitis and pneumonia of a harsher climate, afflicted mankind wishes success to the laboratory worker. In the mass of experimental work performed in the last ten years there are certain significant investigations worthy of serious consideration. (1) The upper respiratory tract is practically sterile at birth—pathogenic bacteria, such as the streptococcus, the Pfeiffer’s bacillus and the pneumococcus gradually appear in the child’s throat without symptomatology, and by the 8th month a study of bacterial flora in the baby’s mouth resembles that of the adult. Cultural studies of the first cold of infancy reveal no specific organism. Also in an acute cold, child or adult, early cultures are disappointing, almost sterile. In fact only in the florid stage do the pathogens, as we know them, make their appearance.

A study of clinical influenza 1928-1930 by Janet Bourn (2) indicated that the Hemophilus influenza (Pfeiffer’s bacillus) was not more present in clinical cases than in controls, not more frequent in the influenzal epidemic months of 1928-29 than in the following year. Practically all persons studied, both sick and well showed the organism at some time. Of 76 cases among Johns Hopkins nurses diagnosed as influenza, only 35 per cent showed the Pfeiffer bacillus. Along these lines studies in 1925 by Shibley, Hanger, and Dochez (3) over a period of 5 to 9 months indicated no particular flora

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in nasal discharges other than the usual scattered pathogens. This work, however, did indicate that normal pathogens, such as the streptococcus were stimulated into activity, and as secondary invaders played a formidable role. This significant activity on the part of pathogens is also suggested by Shibley, Mills, and Dochez (4) in their studies of the transmission of the contagious cold to the higher ape. The all-important fact, however, demonstrated conclusively by Dochez and his co-workers, and later substantiated by the Johns Hopkins group of the Abel Foundation is that "the contagious cold in human beings is caused by an invisible, uncultivable, filtrable agent, which in all likelihood belongs to the group of the so-called submicroscopic viruses." (3) The claim is not made that the filtrable agent is responsible for all colds, and is, therefore, the sole malefactor, but only that again and again filtered nasal washings passed into the nares of apes and humans produced in 1 to 4 days the typical common cold as we know it. Cultural studies in transmitted cases revealed nothing suggestive from the etiological standpoint until somewhat late when the usual secondary invaders, or pathogens become fairly numerous, thus repeating the customary findings of the average contagious cold. At this point emphasis should be placed on the fact that all possible pains were used in these experiments to avoid error. Experimental subjects were isolated under strict precautions often for ten days. Nasal washings in broth or salines were passed through Berkefeld V or W candles, or a small Seitz filter, and were then recultivated for aerobes and anaerobes. As a control measure, Dochez, Shibley and Mills (3) injected "25 cc. of filtrate intracerebrally or intracisternally in rabbits to exclude the presence of Herpes virus". Certain gram negative filter-passing anaerobes cited by Olitsky and Gates were declared non-pathogenic after careful investigations. (5) A most significant experiment to my mind was one of transmission carried out by Dochez, Mills and Kneeland. (6) The 15th culture, representing a dilution 1-2 quadrillion and 74 days of time since the original virus was removed from the first patient, produced typical severe colds in 2 out of 3 subjects. It is

inconceivable that enough of the original virus could be left to produce the symptom complex. Summing up such experimental facts as I have been able to present:

1. In 40 to 50 per cent of transmissions a filtrable and carefully controlled virus has produced typical contagious colds in ape and man. This is a demonstrable laboratory experiment but may only prove a part and not the whole of the causative agent.

2. Many experiments point to this virus as a precursor or an activator of the pathogens. Just as the streptococcus plays such a vicious role in late measles, so eventually studies may prove that the cause of contagious colds is only dangerous, because it paves the way for virulent activity on the part of such pathogenic organisms as the streptococcus and pneumococcus, which normally are harmlessly present in the nasopharynx.

From the practical standpoint this etiological discussion reveals little that is helpful at the present time, but is certainly interesting and sheds a little light upon a hitherto most obscure medical problem. I see no need to discuss symptomatology. The complications of the contagious cold I shall only refer to, and every year it seems to me their menace is greater and their occurrence more evident—otitis, sinusitis, mastoiditis; brain, heart, lung, kidney, and joint complications—everything from multiple abscesses to general sepsis and death.

If not only the patient but the doctor would view the common nose-cold as a potential mastoiditis, and the common chest-cold as a potential broncho-pneumonia, then it seems to me definite progress along preventive lines would ensue. Certain features in treatment I wish to cite and essentially from the pediatric standpoint:

1. The importance of vigorous measures at the very first appearance of the common cold. No one stands idly by and watches a fire spread from a wastepaper basket to the whole room before making an effort to quench it, and yet we are culpably sluggish in dealing with infections of mucous membranes. Hence, my first advice is to put the child to bed and isolate. This measure hastens cure, helps to prevent the spread of the infection to other mucous membranes, and makes it easier to protect the rest of the patient's household.

2. Once your child is in bed, let him out of bed with caution. One can suggest three hours in a chair in the sunshine to the convalescent adult, but hardly to the run-about. Like the soldier, when the child is discharged, he must be ready to go the limit.

3. Local treatment. Silver salts as a rule but not

over 4 days—and aqueous ephedrine solutions for comfort and to expedite drainage when congestion is severe. Later sprays of volatile oils are beneficial. On a series of influenza cases tested with controls at Gen. Hospital No. 9 in the fall of 1917 there were 30 to 40 per cent less otitis and sinusitis among those patients having silver salts instilled into the nares.

4. Dietetic. Because in infections of mucous membranes there is a tendency to acidosis, the free exhibition of fruit juices is advisable. Fruits raw and stewed, carbohydrates, and vegetables form the dietary essentials with milk and milk desserts, if no nausea.

5. Vaccine therapy. Stock vaccines are only occasionally beneficial. Walker (7) maintains that excellent results can be obtained with streptococcus vaccines made after a study of the prevalent groups in a particular season. These vaccines were given preferably within 24 hours of the onset. Autogenous vaccines sometimes give brilliant results depending upon the luck as well as skill of the vaccine maker.

6. Ultraviolet radiation. Seems to disappoint Douall (8) et al in a study of the control of the frequency of colds in adults. They fail to support in their studies the contentions of Maughan and Smiley. My own experience has been good.

7. Drug therapy. Alkalies and salicylates used judiciously seem beneficial.

8. Preventive therapy in conclusion. The ultraviolet lamp did not increase resistance to infection in rabbits (9) nor did the excessive use of vitamin A. (10) My discussion of vaccines above applies equally here. Theoretically the more robust the child, the less liable is he to infection, and the more likely is he to suffer a mild attack. Practically and clinically this is not true. The robust child exposed seems to contract a contagious cold with the same avidity as the weak child, and often has a more severe case. If he has had no environmental immunity, is a country child in other words, his susceptibility is quite marked. None of us will forget the effect of influenza and measles upon our most robust country boys in army camps of 1917. Bearing all these facts in mind I venture to close with the following suggestions for cold prevention in childhood:

1. See that the child's nose, throat, and accessory cavities are not pathological.

2. Diagnose early and remedy if possible allergic manifestations.

3. Always avoid exposure to infections of mucous membranes and if exposed use silver salts intranasally for three days.

4. See that his food, clothing, and rest are suitable; that he has abundant fresh air, that he is never anaemic, and that his skin reacts quickly to heat and cold. Let him avoid marked chilling and fatigue. In other words if he is not a normal child physically, and psychically, work over him and with him

sympathetically until he becomes one. It seems to me the very best that a pediatricist can strive for is to see that at the age of puberty the boy or girl leaving his office for the last time, leaves it with a courageous mind and a vigorous body. To attain that object the avoidance, or the prompt cure of the common cold is a strategic move of inestimable value.

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CANCER OF CERVIX UTERI

In the treatment of cancer of the cervix uteri, H. S. Crossen, St. Louis (*Journal A. M. A.*, Dec. 24, 1932), gives as large a dose of the hard rays of radium as the conditions permit without extending the soft-ray slough into the bladder or rectum, and then follows this at a selected time with high voltage roentgen therapy. All eleven patients whom he treated in this manner were living and without evidence of recurrence from five to nine years after treatment. In each case the diagnosis of carcinoma of the cervix was confirmed by microscopic examination of removed tissue. These were not early cases but advanced ones. Most of the patients had extensive parametrial involvement with fixation to the pelvic wall. The cases were practically hopeless from the operative standpoint, and yet with intensive radiation treatment the patients are living at the end of from five to ten years, and free from cancer.

INTRACRANIAL BIRTH HEMORRHAGES*†

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Augusta

Probably no condition connected with the birth of the child constitutes as great a menace to its life and future well-being as does intracranial hemorrhage. It is probably responsible for at least half of the deaths that occur during the first two weeks of life. The majority of convulsions, excluding tetany, occurring during the first year of life, and almost all of the hemiplegias, paraplegias, and paralyzes found in childhood, are likewise due to this cause.

This condition is frequently not recognized immediately after birth unless the symptoms are very marked, and then they may be attributed to such conditions as asphyxia, congenital atelectasis, or congenital anomalies of the heart. Even in late infancy and early childhood when there is definite evidence of mental retardation, the connection with birth injury is seldom considered.

Etiology. Ehrenfest states: "In necropsies properly performed on all still-born infants and new-born infants dying during the first few days of life, some lesion, clearly traumatic in origin, is discovered within the skull in approximately one-half the cases, most common among which are tears of the tentorium." And this statement has been confirmed by many other investigators.

The hemorrhages affecting the central-nervous system of the new-born, are almost all of traumatic origin, and the rupture of large vessels which give rise to hemorrhages are always the direct results of birth injuries. Smaller extravasations of blood may be due to the congestion caused by labor. Congestion also exercises a considerable influence on the intensity of hemorrhages caused by trauma, but is probably never the direct cause of severe hemorrhages.

Intracranial hemorrhages large enough to produce symptoms are always due to intracranial trauma. The causes of intracranial

trauma may be divided into predisposing and determining factors.

Predisposing Factors. Of all the predisposing factors prematurity is the most important one. Ehrenfest thinks this is due to the thinness of the premature skull, and the widely separated suture lines which predispose to excessive moulding of the fetal head during labor. Chase does not consider this the only factor, because the head of the premature infant is smaller, and therefore subject to a shorter period of moulding in its passage thru the birth canal.

From a careful histological study of the tentorium cerebelli, which is the usual site of the hemorrhage in the premature infant, he thinks its structure is responsible for its greater friability in the premature infant. He found that the tentorium cerebelli of the premature child differed in three important respects from that of the mature child. In the tentorium cerebelli of the premature child there is (1) a predominance of fibroblasts with few collagen fibrils, (2) an absence of elastic tissue fibres, (3) a relative abundance of lymph spaces and thinned walled vessels. This immaturity of the fibrous connective tissue as shown by the absence of collagen and elastic fibrils accounts for its increased friability, and this predisposes to injury.

Syphilis, cardiac lesions and toxemias of pregnancy are only of importance as predisposing causes in so far as they tend to cause premature birth.

The hemorrhagic diathesis, while denied by some as being a predisposing cause, is probably an important factor in certain types of hemorrhage. But it is probably never responsible for the rupture of a large vein or sinus. However, if the coagulation time is considerably increased, the prolonged bleeding, even from a small vein, may prove fatal.

Determining Factors. The mechanical factors are without doubt the most important determining causes in intracranial lesions, and all lesions of the dura mater are probably due to these causes.

Compression of the fetal head, with a relatively small reduction in the volume of the skull, but with a rather marked change in its configuration, may be considered an integral part of every labor. This is usually free

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of any harmful effect on the child because under normal conditions a process is at work that prevents a pathologic increase of intracranial pressure. The process of moulding, however, effects a change in the relative position of the adjoining skull bones, which, under certain conditions, may be pathological.

Kundrat has shown that certain conditions must be present for hemorrhages to occur. The skull bones must have firm, hard edges and a fairly wide membrane so that the bones can over-ride one another. If the bones are soft or the interstitial membrane very wide over-riding is not so apt to occur, because the pressure of delivery compresses the brain together with the skull. Also when the bones are rigid and the interstitial membranes are very narrow, little or no displacement can take place, and hemorrhage is less likely to occur.

When the parietal bones over-ride one another the superior longitudinal sinus is compressed; the veins opening into it are stretched, twisted, and finally torn, but rupture of the sinus itself rarely occurs. The occipital bone may be pushed under the parietal bones, thus stretching the transverse sinus, and finally tearing the veins opening into it.

Hemorrhage into the falx and tentorium may be due to changes in the lateral, antero-posterior, and vertical diameters of the head. Holland has shown that pressure on the fetal head in one diameter results in a shortening in that diameter and a compensatory increase in some other.

Greenwood, while agreeing that the vertical diameter of the head is always increased in breech presentation, has shown that the sub-occipital bregmatic diameter, which is engaged in normal labor does not produce vertical elongation of the head, but causes an actual decrease in this diameter with an increase in the horizontal one. The increase in the vertical diameter seems to be the most logical explanation for the greater number of tentorial injuries in brow and breech presentations and was first advanced by Wilke and Seitz. Later Greenwood showed that the vertical lengthening of the head was usually due to the occiput being firmly pressed against the symphysis pubis.

Crothers demonstrated that vertical length-

ening of the supratentorial chamber in these cases produced a marked stretching and strain on the tentorium, and this is further increased by any traction on the body from below, which is transmitted thru the vertebral column and cord.

From a study of the arrangement of the fibers in the tentorium cerebelli and in the falx cerebri, it would seem that their chief function is to prevent an increase in the vertical diameter of the head during the process of moulding.

The mechanical process of moulding during labor is often responsible for intracranial injuries, but it is certainly aggravated by operative manipulations, even when done by the most skilled obstetrician, and in those less skilled the number of intracranial injuries will be correspondingly higher. All cases of prolonged and difficult labor must be considered potential cases of intracranial injury and any operative interference, regardless of how slight, must be done with care.

Chase thinks the application of forceps is the most common operative procedure associated with intracranial lesions, with podalic version and breech extraction a close second. Bauereisen is of the opinion that podalic version more easily leads to intracranial injuries than extraction with forceps, for whereas the pressure exercised on the skull in the latter case can be graded, the attempts at extraction of the after-coming head are often attended with considerable trauma.

While the use of forceps or podalic version by those unskilled in their technic accounts for many of the intracranial hemorrhages, they do not account for all. Prolonged difficult labors account for many injuries, and the longer the period of moulding the head is subjected to, the greater the chance for hemorrhage; and particularly when pituitrin is used to terminate this type of labor.

Subdural hemorrhages also occur after easy spontaneous labors of short duration. It sometimes appears that the force of one hard labor pain is sufficient to produce an injury. The injury here is most frequently located in the tentorium, as this structure seems to bear the brunt of the trauma.

Certain methods of resuscitation may be

responsible for intracranial injury and hemorrhage. This is particularly true of Schultze's method of resuscitation, due to the lateral compression of the head which is held fixed during the procedure, and therefore predisposes to tentorial splits.

Location. Intracranial hemorrhages may occur anywhere inside of the skull. They may be in the brain tissue proper, in the ventricles, or surrounding the brain. The hemorrhages outside of the brain may be between the dura mater and the skull bones, or subdural, between the dura and the arachnoid, or beneath the arachnoid in the reticulum of the pia mater, on the upper surface of the brain or in any of the septa of the brain. The subdural hemorrhages are by far the most important of the intracranial hemorrhages. If the subdural hemorrhage is small or moderate it is usually confined to the posterior and middle fossa and if large, the anterior fossa may also be involved.

Supratentorial hemorrhages may be due to injuries of the superior longitudinal sinus or its tributaries, transverse tears of the free edge of the tentorium, or injuries of its upper layer. The usual source of hemorrhage in the supratentorial fossa, however, is the tributaries of the great cerebral vein. The extravasated blood covers the cerebellum and surrounds the cerebral peduncles and medulla if the hemorrhage is large. In some cases the blood passes into the temporal fossa or around the occipital lobe. In infratentorial hemorrhages the hemorrhage is usually due to injuries of the transverse sinus or its tributaries, injuries of the free margin of the tentorium, or the great vein of Galen, or its tributaries.

Hemorrhages into the lateral ventricle are usually due to injuries to the straight sinus, the great vein of Galen, or its tributaries, though it may be due to injury of the inferior longitudinal sinus, or its tributaries. Chase, from his studies on subdural hemorrhages, believes that extensive subdural hemorrhages from the intratentorial vein are only possible under two conditions. First, prematurity; second, rupture of the intratentorial tributary of the straight sinus. Injury to the tentorium cerebelli does not necessarily mean a hemorrhage. The site of the lesion

determines the presence or absence of the hemorrhage.

Symptoms. The symptoms of intracranial hemorrhage depend upon the location and size of the hemorrhage. If the hemorrhage is very large and the amount of trauma considerable, the baby is either born dead or dies shortly after birth. In the case of large infratentorial hemorrhages, death takes place immediately. This type of hemorrhage is most frequently seen after breech extraction.

Many cases, in which hemorrhage has occurred, are difficult to resuscitate, but this having been accomplished, appear perfectly normal for a short while, and then the symptoms of intracranial hemorrhage gradually appear. The earliest symptoms noticed may be shallow respirations with mild cyanosis, but more frequently restlessness and hyperesthesia are the first symptoms. The hyperesthesia may be so great that the slightest movement of any portion of the body causes the infant to cry out. If the intracranial pressure is increased there will frequently be disturbances in the respiration, such as slowing and irregularity, but slowing of the pulse is seldom seen.

There is frequently a difficulty in swallowing and many infants refuse to nurse. Motor irritability, and particularly convulsions, is the most characteristic and important symptom for diagnosis, since intrameningeal hemorrhages are the commonest cause of convulsions during the new-born period. These consist of clonic spasms that occur at varying intervals, and are usually started by external stimuli. They may involve only certain parts of the body, or the entire musculature may be involved. They vary from slight twitches to severe epileptiform attacks with marked tonic spasms of the muscles. There are attacks of intermittent cyanosis which may be very marked. Between the attacks of cyanosis the infant appears very pale. The reflexes are usually increased. There may be strabismus, nystagmus and myosis, and later, in fatal cases—mydriasis, and inequality of the pupils. Some disturbance in the heat regulating mechanisms is present in practically all of the cases, and this is not primarily due to dehydration or inanition, as it is seen in cases in which this is not marked.

The period of hyperesthesia and irritation, in severe cases, is followed by a period of stupor or drowsiness, and finally coma, in which the reflexes disappear and paralysis appears, but some cases remain hypertonic to the end.

Diagnosis. In many cases it is difficult to decide whether the symptoms are due to conditions like asphyxia, congenital anomalies of the heart, congenital atelectasis, etc., or to intracranial injury with or without hemorrhage. Many of the symptoms are alike in all of these conditions. If there is a history of a long difficult labor and the infant is born asphyxiated and is difficult to resuscitate, has repeated attacks of asphyxia and cyanosis, intracranial hemorrhage should be suspected. If in addition there are convulsions, flaccidity, pallor, coma, increase in the pressure of the cerebrospinal fluid and many crenated red blood cells in it, it can mean only intracranial hemorrhage. When all of these symptoms are present the condition is usually hopeless. In the more favorable cases the symptoms are less definite and it is these cases that give the greatest concern. However, when in doubt the patient should be treated as a case of intracranial hemorrhage as no harm can come from this form of treatment but irreparable damage may be done if too violent resuscitative measures are resorted to.

Prognosis. All cases of intracranial hemorrhage do not end fatally. Some cases show an improvement after the first few days. The convulsions become lighter and finally disappear. The cyanosis disappears and the sucking reflex gradually returns. Paralysis, if present, may persist for months, gradually improving, or it may remain as a permanent condition. The appetite improves and the child begins taking food. If the hemorrhage is small the child may make a complete recovery. The majority, however, show some permanent defect. It may result in the severer cases in quadriplegia and idiocy, while in less severe cases, in epilepsy, hydrocephalus, and certain nervous disorders.

Treatment. The treatment of intracranial injury is preventive as far as possible. This comes under the obstetrician's care, and resolves itself into the prenatal care of the mother. A careful history and physical examination should be made on every pregnant woman as soon as possible. If there are any findings

that would lead one to suspect trouble they should receive appropriate treatment. The mother's health should be kept as near perfect as possible, and all foci of infection cleared up where possible. If chronic diseases or toxemias of pregnancy are present, they should receive appropriate treatment, as they tend to produce prematurity. Speidel advises against allowing the mother to gain more than twenty pounds, since a greater weight may mean too large or too fat a baby, which tends to produce a long, slow, difficult labor. It is, however, doubtful whether dieting in moderation influences very much the size of the baby. Sufficient exercise should be taken daily to maintain a good musculature which may spare the patient a condition of inertia, which necessitates the use of forceps or some other measure.

Once hemorrhage has occurred the kind of treatment instituted may determine the outcome. Since hemorrhage may be present without producing clinical symptoms, all cases of prolonged or difficult labor should be considered as potential intracranial hemorrhages and treated as such. All external stimulation must be avoided. The child should be left absolutely alone so far as possible, and adequate external heat should be supplied. All violent resuscitative measures should be dispensed with. The best means of stimulating the respiration is by inhalation of a mixture of CO₂ and oxygen. This may be continued as long and as frequently as necessary.

If there is a family history of blood dyscrasia or a tendency to prolonged bleeding, the baby should be given whole blood intramuscularly, or an intravenous transfusion.

Where there are symptoms of increased intracranial pressure, lumbar or cistern puncture with draining off of spinal fluid is indicated. This may be done as often as every six or twelve hours until the intracranial pressure returns to normal.

Riesenfeld treats intracranial hemorrhages by placing the infant in the upright position. This line of treatment is based on the experimental work of Weed, who showed a definite parallelism between the cerebrospinal fluid changes and changes in sagittal venous pressure induced by changes in position. When the infant is placed in this position he states that beneficial results were apparent in most instances. There was a gradual lessening in the intensity of the symptoms. The respirations became more nearly normal and the cyanosis and convulsions were less marked.

If there is difficulty in swallowing, or the baby is stuporous, the food and water should be administered by a stomach tube as there is less likelihood of aspiration into the lung.

Since the outlook of patients with intracranial hemorrhage particularly the moderate and large ones are not bright, some brain surgeons have advocated decompression operations with the removal of the blood clot, or trephining following by irrigation to remove the coagulated blood. These more radical measures should be reserved for the larger supratentorial hemorrhage, as the mortality is very high.

Summary

1. Intracranial hemorrhages are responsible for many of the deaths that occur during the first few days of life and most of the paralyzes seen in childhood.
2. They are frequently not recognized at birth.
3. They occur most frequently in the premature infant or the infant subjected to a long difficult labor, and particularly when instrumentation, podalic version with breach extraction, or pituitrin is used to terminate this type of labor.
4. They are always due to intracranial trauma.
5. The hemorrhage may occur anywhere inside of the skull, but subdural hemorrhages are the most important.
6. The symptoms depend upon the size and location of the hemorrhage.
7. The prognosis depends not only upon the size and location of the hemorrhage but the type of treatment instituted.
8. The treatment consists in prevention as far as possible by appropriate prenatal care.
9. All prolonged or difficult labors should be considered as potential cases of intracranial hemorrhage and treated as such. Respiration should be stimulated by a mixture of carbon dioxide and oxygen rather than by violent resuscitation measures.
10. All cases of intracranial hemorrhage or suspected intracranial hemorrhage should be put at absolute rest and external heat applied when necessary. The increased intracranial pressure should be relieved and the respiration maintained. The body fluid should be maintained and above all the infant should be watched closely.
11. In large supratentorial hemorrhages the blood clot may be removed if adequate surgical facilities are available.

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DISCUSSION ON PAPERS OF DRS. BLANCHARD, BURPEE AND WARING

Dr. Wm. Willis Anderson, Atlanta: Although rickets is a general nutritional disturbance and affects every part of the body, if it is not treated vigorously (and even in some instances when it is treated vigorously) bad deformities of the bones occur, necessitating detailed orthopedic work later on. Common among these deformities are bowed legs, flat feet, rachitic pelvis, stooped shoulders, and knock knees. The worst rickets occurs in the dark skin races, such as Italians and Negroes. Almost every little Negro baby is bowlegged.

On account of the increased flexibility of the bones, fractures (sometimes referred to as "spontaneous fractures") are produced as the result of weight bearing, or some minor occurrence that would not ordinarily fracture a bone. Several years ago one of my little patients showed evidence of pain in her forearm. An x-ray examination revealed a fracture, and also rickets, which I had not suspected.

In older children comparatively little result can be expected from the usual treatment of rickets in younger children. Rickets should be recognized early, even before deformities occur, and treated vigorously. Children from birth until a year and a half to two years old should have their diet and hygiene supervised with an idea of preventing rickets, should receive an abundant amount of sun baths and should take cod liver oil regularly. In rare instances when cod liver oil cannot be tolerated, viosterol may be substituted. Rickets usually can be prevented, and should be prevented.

Dr. C. E. Boynton, Atlanta: I am glad to see at this meeting that the pediatric section has continued to do its main work, and that is the education of the public. Practice is a secondary matter as compared to the great benefit to be derived from the education of the people. I think every essayist this morning has made a very happy selection. The only thing is that there has not been time enough to really go into the subjects. The same is true of the discussion. Twenty-five years ago the great, outstanding work of the pediatricians was on intestinal diseases. The doctors went after these diseases and we no longer see long columns of death notices due to intestinal trouble.

Discussing the common cold, I think it is high time the public was being educated along this line. The public today seems to think that a cold is a "telephone disease." How often do we hear over the phone, "The baby has a cold, Doctor, what shall we do for it?" They do not want an examination, just information over the telephone, and of course no bill. We have to tell them what to do as well as we can, for they insist that they do not want to see us. What do they mean by a cold? It may be nasal diphtheria, bronchitis, or anything. It may be the

beginning of measles, or whooping cough, with its terrible toll following. If we could only educate the people that it would save them money to allow an examination and a proper diagnosis in the beginning, there would be fewer bad after effects. Epidemics not only of colds but of those more serious diseases would be prevented to a large extent, just as intestinal diseases have been stamped out to a large extent. The subject is so large it is hard to know how to tackle it. People do not realize that a cold in an infant, especially under three months, is likely to lead on to a bronchitis and in a three months old infant that is just as bad as a pneumonia. They are likely to have suffocative attacks. Parents think as there is little temperature the child cannot be sick. I remember an instance in which a doctor informed the parents that the child could not be very sick as the temperature was only 100 F. The lungs were congested and the child was deeply cyanosed, having suffocating attacks every few minutes. They had gone to sleep on the job and almost allowed the child to die.

Every child with a cold should be kept away from school, and above all things should be kept away from Sunday School. The Sunday School is the greatest breeder of contagious disease of anything I know of. At children's parties an invited guest may cause sickness among three-fourths or nearly all of the other guests. I say it is time that we as physicians, and especially pediatricians, should stress "colds" as intestinal diseases have been stressed.

As to rickets, I am almost ready to believe that everyone has had rickets and those unborn will have it unless we work harder to prevent it. Many mothers think it is a disgrace to have rickets. If you find rickets in the early stage when it is curable, and mention it they immediately go to another doctor and some doctors, I am sorry to say have not backbone enough to confirm the diagnoses or they are ignorant, or the third alternative begins with an "L." If we would all give more attention to rickets there would be fewer bowlegs.

To go on to hemorrhage; there are more brain hemorrhages than we have any idea of. If we wait until a positive diagnosis of brain hemorrhage can be made the case will end in death or terrible after effects will remain. I think it would be an excellent procedure in any case where there is the slightest suspicion to do a spinal puncture and if there is any blood in the spinal fluid to inject whole blood directly into the buttocks. The time to stop the damage from hemorrhage is before much blood escapes.

As to pituitrin, I have had a very strong feeling concerning the use of this in obstetrics for a long time. I have gone so far as to say that two men should pass an opinion in these cases before pituitrin is given. Everyone does not understand the substance.

Dr. Benjamin Bashinski, Macon: Of course all of us enjoyed Doctor Burpee's paper and we know that there is much difficulty in the early diagnosis of cerebral hemorrhage because of so many other con-

ditions simulating it. Among these conditions we find a reflex action of the brain which is often increased at birth and causes convulsions. Again an eclampsia neonatorum occurs and so does tetany, although many claim that tetany is never seen in a new-born. We also have tetanus from the umbilical stump, again encephalitis and meningitis which may be intra-uterine or due to otitis. Acute congenital hydrocephalus must be considered. Having all these conditions in mind it is easy to see that an early and correct diagnosis is not easy. Doctor Boynton mentioned spinal puncture, but this has its danger. Doctor Boynton also mentioned the injection of whole blood which does help. As to spinal puncture, it is an aid in diagnosis but is not pathognomonic and it is fraught with evident short-comings and danger. Ascertaining the blood clotting time is important, but if you relieve the pressure by spinal puncture and there is a delay in the clotting time it will cause a continuation of the hemorrhage. A seemingly increased pressure may depend upon the position of the baby, character of the respiration and certainly is influenced by crying. At any rate spinal fluid should be obtained for cultures and chemical study. It is very peculiar in cerebral hemorrhages that the heart action will continue for sometime even though respiratory action is never started, so in most cases the damage seems to be due to increased flow of blood. We should if possible diagnose the case if it is a true cerebral hemorrhage case, for all of us doing pediatrics see so many cases that terminate in idiocy, paralysis or epilepsy.

Pituitrin, as Doctor Boynton has said, has done more damage than any drug or procedure with which we are familiar. Physicians are taking more time, are doing better obstetrics, and in the last few years we have been seeing fewer cerebral hemorrhages than ever before.

Dr. M. Hines Roberts, Atlanta: All of these subjects are of vital interest to the pediatrician. Doctor Burpee has asked me to say a few words about "Intracranial Hemorrhage" in the new-born. It is a subject which I have studied, rather intensively, for the past nine years among the Negro new-born infants at Grady Hospital. The therapeutic procedure in the treatment of this condition is still a matter of controversy. It is certain however that its occurrence is frequent. In a series of 1000 spinal punctures in the new-born I have found that twelve per cent show gross blood in the spinal fluid.

Xanthochromia of the spinal fluid of new-born infants is a physiological condition and does not indicate intracranial hemorrhage. I have never seen a fluid withdrawn during the first few days of life which did not show some pigment. It quickly disappears after this period in normal infants. Dr. Levison states that the normal spinal fluid of new-born infants is clear, but admits that in his studies over eighty per cent showed xanthochromia.

The pigment of spinal fluid of course is increased in the presence of intracranial hemorrhage.

Doctor Ehrenfest has shown that trauma of the venous system accounts for practically all intracranial hemorrhage of the new-born. By means of metallic mercury injection in the cadaver I found evidence which pointed also to a break in the arterial system. Doctor Ehrenfest has criticised this work, stating that it is probable the apparent breaks were artefacts.

In the treatment of intracranial hemorrhage, certainly an initial puncture should be done in every case to establish the diagnosis. Subsequent punctures are indicated in case of convulsions or definite evidence of increased pressure.

Dr. W. A. Mulherin, Augusta: I wish to stress a few of the valuable points brought out in the three papers on pediatrics.

It is essential to the proper understanding of rickets to recognize the fact that it is a systemic disease. While its chief clinical manifestations are seen in the bony structure of the body, all other tissues of the body are affected. The mucous membranes show this with lowered vital force, which manifests itself with increased tendency to head colds, laryngitis, pharyngitis, trachitis, bronchitis and pneumonia. Likewise the blood shows its effects in the form of secondary anemia. The general muscular tone is lowered as demonstrated by pot-bellies. The nervous system will show its effects in the form of nervous, irritable, fretful, colicky babies and children. The glandular structure of the body will manifest dysfunction, with profuse perspiration, especially around the head. With such distinctive manifestations, detrimental in influencing the growing baby and child, it is quite easy to reason out why rickets plays such an important role in increasing morbidity and mortality at this age. We all know how frequently and poorly infants contract and withstand such diseases as affect the respiratory and gastro-intestinal tracts.

Fortunately the medical profession can accomplish wonders as regards preventive and curative treatment of rickets. Yet, I am of the same opinion as Alfred Hess, who has done more constructive work on rickets than any other man in the world, who claims that there is some unknown factor in the etiology of rickets. Like Hess, I have occasionally seen a baby under my own care, where I have begun cod liver oil in proper doses at three weeks of age, and who had received the recognized proper diet, develop rickets right under my eyes. Fortunately, this is a rare occurrence, but it is worthy of note. We know that ultra violet rays are almost a specific for rickets. Likewise cod liver oil given in proper doses. In the south we are blessed with a lot of God-given sunshine with the richest vitamin D potency. Therefore this should be utilized, and is being utilized, with the result that in clinic and private practice we are certainly seeing fewer cases of rickets now than formerly.

Regarding the intracranial hemorrhage, I wish to call attention to the difficulty in differentiating between edema of the brain and intracranial hemorrhage. It is a difficult diagnosis to make with certainty. The symptoms of both are due to secondary pressure in

the intracranial vault, therefore it usually takes a few days to clear up diagnosis, for edema of brain is of short duration, while intracranial symptoms are more prolonged. There is one symptom that should always receive due recognition, and that is the failure on the baby's part to nurse mother's breast for the first one or two days. This absence of a normal instinct should make the physician watchful, and when in addition to this symptom the baby begins to moan, be fretful and restless, have a little twitching of the facial muscles, especially the muscles supplied by the intracranial nerves, with one or two convulsions, then the diagnosis becomes quite clear cut. If the spinal fluid examination shows pressure above 10 mgs of mercury you may feel quite sure of your diagnosis of intracranial hemorrhage, especially if this clinical picture is presented 48 hours after birth.

Formerly I took a rather hopeless view of these cases, thinking the child would be better off if it died than to suffer from the ill effects later in life. I now believe that half of them get well without any of the bad effects, provided the cerebral trauma and hemorrhage have not been severe ones. Many of the mild cases go unrecognized for they have mild symptoms and nature takes care of them. In cases where there exists severe trauma I believe most of the infants die early.

Regarding the common cold I would like to stress the point Doctor Waring clearly brought out in his paper. That is, in the adult it is more a matter of inconvenience, while in the baby and child it is of much more serious import. The administration of an initial dose of castor oil to cure a baby's cold should be condemned. Personally, I think it is taking a mean advantage of the baby. For the hundreds of years that it has been used I seriously doubt if there has been any advantage gained by its administration. I am of the opinion that it would do the baby more good if mother would give daddy the dose of castor oil rather than punish the baby with it. Also I would like to pay my respects to the old time-honored mustard plasters that are used routinely in the treatment of pneumonias and bronchitis. For the last three years I have not used a mustard plaster in any of my pneumonia or bronchitis cases, and I feel reasonably certain I have secured much better results. If the circulation in the lungs is different from that in the chest wall, and the principle of counter irritation is to draw blood from the deepest structure, it is difficult to reason out any advantage to be gained by applying a mustard plaster to a baby or child's chest.

Dr. James A. Wood, Atlanta: I have enjoyed these papers very much and wish to discuss the one on rickets.

Nature has provided certain climatic conditions in order to prevent rickets and to prevent the opposite condition produced by excessive exposure to the sun's rays which may be injurious.

It is interesting to note that the skin pigmentation of the native inhabitants in different climates is ad-

justed to meet their individual needs. Black skins absorb the violet rays less, so this type is found in the tropics, where the rays are more intense and direct. As we go north the skin pigment is lighter, until we find in Scandinavian countries a very blond type. These people need light skin to make them absorb enough of the violet rays from the diminished source to meet their requirements. In the arctic regions one would expect to find that the Eskimos would be very light, but the contrary is true. They must be prepared to endure six months continuous daylight so their skin is dark. In other months their diet of fats and oils, rich in vitamin D tends to make up for the lack in the sun's rays.

In our country where many races are found outside their native habitat, we find rickets very prevalent. As we might expect it is more marked in the dark skin types, especially those living in the more northern states. This disease, however, is not confined to dark skins but is apt to be present in any child not given preventative treatment. Many light cases can only be diagnosed by x-ray, so it is a good policy to treat every child as a potential case of rickets. Every child should be given an adequate amount of vitamin D in his diet in addition to being given ample exposure to sun rays.

Dr. Lee Howard, Savannah: I am sorry that I did not hear all of these interesting papers, but I had an opportunity to read Doctor Waring's paper and wish to say a word as a bacteriologist.

I am certain you are impressed with the many perplexities in this recent work on the bacteriology of colds, as outlined by Doctor Waring, and they are an index of the uncertainty of bacteriology as a whole, at this time. This is due to many of our old standbys being torn down. In fact few bacteriologists know where they are. Even the morphology of bacteria is changeable, and with so many fundamental changes, it is hard to tell what may happen.

What I wish to stress is the importance of work along clinical as well as laboratory lines. I believe that here is where we will finally solve these problems. There has been much good work but too far away from the practice of medicine, for busy doctors do not speculate, or produce many clinical researches. Even the word "research" has a formidable import for most of us. Recently the Public Health Service sent out a request that each hospital in the service, if possible, undertake some research along clinical lines, but so far there has been little if any response.

I think a re-arrangement of what we mean by research is needed. We are inclined to think it necessary to get up some original subject. The original in medicine, I think, is the patient, and a careful clinical record of cases is just as much research as "Observations on the Peristalsis of the Newt."

Dr. Thomas E. Rogers, Macon: Referring to intracranial hemorrhage, I just want to make a plea for spinal puncture in suspected intracranial hemorrhage

in the newborn. When the thing comes home to you one has a feeling that is very different about it. If an infant has jaundice, or has undue spasticity, or if he draws his thumbs in, or fails to nurse properly, a spinal puncture will do absolutely no harm and you may save that child from paralysis, or convulsions, epilepsy, feeble-mindedness, or perhaps just paralytic groups of muscles, so do not hesitate if you find any of these symptoms of intracranial hemorrhage to do a spinal puncture. It frequently will save some of these bad after-effects.

Dr. Mercer Blanchard, Columbus, (closing): I only wish to thank the gentlemen for their generous discussion.

Dr. A. J. Waring, Savannah, (closing): In regard to the remarks of Doctor Howard, it is true that there has been incomplete study of the common cold. It lags on the clinical aspect, there is no doubt of that. Large corporations throughout the country are vitally interested because of the continual sick list they have to contend with. I know that the American Telephone and Telegraph Company, for instance, has willingly aided the intensive study now being made at Johns Hopkins. Clinicians have made no definite attack on the problem in conjunction with the laboratory men, and until the activities of these fields are correlated we will not make genuine progress.

Some work has been done by the Public Health Service, and one observation was that the peak of contagious colds over this country happened at the same time. Even when there were two or three rises in the peak of incidence they would occur at the same time in different parts of the country. In the far South, in Florida, there was an increase in the common cold at the same time as in Seattle. This is important but the reason for it we do not know. There has been a good deal of work on the influence of worry, so far without much result.

The correlation of the work of the internists and clinicians in conjunction with the laboratory workers is of the utmost importance.

Dr. C. M. Burpee, Augusta, (closing): I am very appreciative of the liberal discussion.

Martin E. Reh fuss, Philadelphia (*Journal A. M. A.*, Dec. 31, 1932), presents evidence to demonstrate the presence of an active principle in the mucosa of a large part of the digestive tract capable of stimulating the smooth muscle contractions of the small bowel. By means of tissue extracts prepared with Locke's solution, this effect can be demonstrated in vitro on excised small muscle strips and in vivo by intravenous injections. Evidence is presented to show that this substance is not histamine, secretin or cholecystokin, although it is closely associated with the latter. The author gives the preliminary report of an attempt to isolate such a principle.

CARCINOMA OF THE COLON*

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With the increasing diagnostic accuracy, especially of the roentgenologist; with improved technical maneuvers for its extirpation; with accepted methods of preparation of the patient for its removal, as much progress has been made in the past ten years in surgery of the carcinoma of the colon, both as regards operative mortality and end results, as in any other field of surgery.

In order to better understand why symptoms are not all alike in different parts of the colon and why there are differences in surgical attack, and why the prognosis differs for different segments, one must have some knowledge of its anatomy and physiology.

The right half of the colon, including the right half of the transverse colon, is developed from the midgut; the left half from the hindgut, including the sigmoid and rectum which are not included in the scope of this paper. The right half is supplied with blood by the superior mesenteric artery and has a comparatively better blood supply than the left half has through the inferior mesenteric artery. The right half of the colon and the splenic flexure have poorer lymphatic connections. The lumen of the right half is three or four times larger than that of the left half. The function of the right half is mainly absorptive, while the left half is a canal for storage and elimination. The contents of the right half are liquid, while those of the left half are semi-solid and solid.

Little can be added to the etiology of carcinoma here than that applicable to carcinoma elsewhere, except that polyps of the large bowel have been definitely proved to be a precursor of carcinoma and that half the patients who have colon polyps die eventually of carcinoma. This makes it mandatory that polyps, when discovered, should be removed even if resection of a large portion of the colon is necessary.

It is only by keeping in mind the early symptoms of carcinoma of the colon that we

can make a diagnosis before metastasis, surrounding inflammation and obstruction take place. In this way only will we be able to improve our end results and lower the operative mortality. Our greatest aid to early diagnosis of growth in the colon proper is the roentgen ray, with which diagnosis and localization can be made accurately in over 95 per cent of the cases. I cannot emphasize too strongly that the barium should be used as an enema after cleaning out the colon and not as a meal which completely closes a small opening through the growth, causing an acute obstruction to be superimposed upon an already chronic obstruction.

The symptoms of carcinoma differ in the right and left halves of the colon because they differ physiologically and anatomically. In the right half of the colon there are three important and common symptoms to be remembered. The first is pain, usually of a colicky nature extending over a period of time and often diagnosed as chronic appendicitis. This type of pain is found in a large percentage of cases and often when the disease is recognized it is far advanced. Second is the symptom of marked anemia without any visible evidence of blood. The patient loses weight and strength rapidly. This anemia is not due to loss of blood but to destruction of blood by the toxins absorbed from the broad ulcerated infected surface of the growth. In an anemia which is so marked as to make us think of the pernicious type we should always remember carcinoma of this portion of the colon.

The third symptom or sign which occurs in many cases is a mass in the right iliac fossa which may be symptomless and may be discovered during a general physical examination. Either one of these symptoms may occur separately or they may occur in combination.

The pathology of carcinoma of the right half of the colon differs from the left in that the growth is flat and ulcerated and located on the side of the bowel with no tendency to encircle the lumen. It presents a wide surface for absorption and because of its manner of growth and the liquid contents of the bowel has no tendency to cause obstruction.

*Read before the Medical Association of Georgia, Savannah, Ga., May 20, 1932.

They are more likely to perforate and abscess.

In the left side of the colon the most common symptom and the earliest one is obstruction. The obstructive symptoms are in the large proportion of cases those of partial obstruction, such as progressively increasing constipation and indefinite colicky pains and flatulence or periods of constipation alternating with diarrhea. There will be increased peristalsis proximal to the lesion in an attempt to force gas and fecal matter through a narrow opening, these peristaltic waves giving rise to a colicky pain which often is a localizing feature, stopping at the site of the growth, and a diagnosis of the location of the growth can often be made by this symptom.

In a patient in the so-called carcinoma age who is developing constipation after having regular bowel habits previously, one should always have carcinoma uppermost in their mind. Acute obstruction may occur without any previous symptoms but this is rare, but if an elderly person develops acute obstruction who has never had an abdominal operation and has no obstructive hernia, the great chance is that it is due to a carcinoma of the left half of the colon or sigmoid.

These obstructive symptoms are explained by the pathology of the growth which is usually of the scirrhus type and has a tendency to encircle the lumen and also by the fact that the lumen of the bowel is normally smaller than its right half and the contents are more or less solid.

Occult or visible blood in the stool is a finding which may or may not be present in carcinoma of the large bowel at any location.

Carcinoma of the colon calls for surgical treatment, with resection of the growth if recognized at a favorable time before extension by metastasis and adhesion to surrounding viscera takes place, otherwise a colostomy should be done proximal to the growth. These patients, when they present themselves for treatment, are relatively poor risks and need rehabilitation before operation, such as relief of partial obstruction by low residue diet, mild purgation and colon irrigations

to remove septic material, relieve the edema of inflammation surrounding the growth and improve the local circulation. They require plenty of fluids and often blood transfusions prior to operation. Except when acute obstruction is present an emergency operation is not indicated, and even then, if the obstruction has not been present too long we can wait long enough to determine the site of the obstruction before planning operative procedure. During this time the patient should be given fluids or blood transfusion.

The large majority of cases are best treated by graded operations and only in early carcinoma of the right half of the colon is primary resection and ileocolostomy justifiable, and even then an ileostomy should be done proximal to the site of the anastomosis, or the closed end of the colon brought up against the wound with long sutures which come out through the upper end of the wound so that if gas does accumulate and cannot be expelled, this end of the colon can be opened to prevent breaking down of the suture line. When normal function of the bowel becomes established this opening closes spontaneously. In practically all other cases a colostomy well proximal to the growth or an ileostomy, if the growth is in the cecum, should be done as a preliminary procedure, waiting ten days to two weeks or longer if necessary to build up the patient's resistance and get the growth and bowel in favorable condition for resection. This decompression above the lesion allows drainage of septic material and gas and also irrigation while the same thing can be accomplished by enemas from below. This reduces the distention and relieves the edema and inflammation in the bowel wall and materially enhances the chances of a healing of the anastomosis and lessens the danger of peritonitis, the greatest lethal factor, following resection. In some clinics intra-peritoneal injections of a vaccine of colon bacillus, staphylococcus and streptococcus are now used as a preliminary to operation, and a lessening of the morbidity and mortality rates are claimed as a result.

Upon opening the abdomen for removal of the growth certain steps should be followed before resection is attempted. The liver and the aortic and iliac lymph nodes should first

be examined for metastasis, the peritoneum next for implants and the growth palpated last, and this should be done gently because of the danger of opening a small abscess or spreading contamination from the local infection throughout the peritoneal cavity.

If we judge resection practicable, we may then proceed by either a resection with end to end or lateral anastomosis and drainage close to, but not against the suture line, if we can get sufficient mobilization without tension, or we may do a Mikulicz operation where the bowel is brought out through the wound and later resected, or a Rankin obstructive resection where an immediate resection may be done between crushing clamps after a thorough resection of the gland bearing reas. The proximal clamp is left on for forty-eight hours if there is no opening in the bowel above. Continuity of the bowel is later established with an enterotribe the same as in the Mikulicz procedure.

When the bowel is functioning properly the ileostomy, cecostomy, or colostomy above the site of operation may be closed after it has admirably served its function of relieving the tension on the suture line and diverting intestinal contents from the anastomosis until it has healed, or until the Mikulicz or Rankin openings have had a chance to heal.

In carcinoma of the colon without metastasis and under local conditions where removal is possible, the prognosis is as favorable as for carcinoma in other parts of the body and often better than for carcinoma in any other part of the gastrointestinal tract.

Report of Case

Patient, aged 58 years, seen at her home on the evening of June 7th. Her complaint was abdominal pain and vomiting, which had been present for two days. The pain was cramplike and at present seemed to stop high in the left side. The vomiting occurs only whenever she eats or drinks anything. Had taken Epsom Salts and Castor Oil making the pains worse with no bowel evacuation. Has not had an evacuation in five days.

Past History. Has never had any serious illness and never any complaint up to one year ago. Up to that time bowels were always regular without laxatives. She then began having constipation requiring purgatives at times for relief. For past six months purgatives gave her cramps and would require twenty-four hours before acting and then her cramps were relieved.

Has never noticed blood in her movements, had diarrhea or rectal tenesmus.

Examination. She is not toxic, pulse 90, temperature 99. Abdomen moderately distended and tympanitic with slight tenderness throughout, but more marked in upper left quadrant. Otherwise the examination was negative. Upon history, especially of the localization of pain in upper left quadrant, a tentative diagnosis of carcinoma of the splenic flexure was made, which was verified by barium enema x-ray.

A cecostomy was done and for eight days the bowel was irrigated above and below. A resection was then done with an end to end anastomosis and drainage near the suture line.

A fecal fistula developed on the fifth day but gradually closed up. She is now, about a year afterwards, perfectly well and has normal daily bowel evacuations.

DISCUSSION ON PAPER OF DOCTOR EGAN

Dr. Thomas Harrold, Macon: I have enjoyed Dr. Egan's paper very much. He has given us a most excellent review of the whole subject of carcinoma of the large bowel and there is little that I can add.

I would like to emphasize a few points that he has made. One is the necessity for more frequent examination of the large bowel by means of the barium enema. Almost the only lesions of the large bowel that the barium meal will demonstrate other than simple diverticuli are tumors that are producing almost complete obstruction. The barium meal is dangerous in this type of case as it may increase the obstruction and if such a high degree of obstruction is already present, the symptoms are usually so pronounced that roentgen ray examination ought not to be necessary. I also feel that the barium enema should be administered under the fluoroscope as it is very easy to miss a filling defect in the sigmoid or near either one of the flexures, due to overlapping of the intestine at these points.

So let me urge that all patients with obscure abdominal symptoms be given the benefit of a carefully and properly made examination with a barium enema.

As in so many other fields of medicine the great disappointment in cases of carcinoma of the colon is that they present themselves for treatment in an advanced stage of the disease. I have operated on three cases of carcinoma of the colon in the past year, each one of which illustrates very strikingly one or more of the characteristics of this disease. I shall refer to each one briefly.

The first patient was a man, aged 56, who had never been ill in his life until about three months before I saw him. During that time he had suffered indefinite pain in the upper left abdomen and had lost fifteen pounds. The pain had become severe the day he consulted me and I could feel an indefinite mass in the upper left quadrant. A barium enema disclosed a filling defect in the descending colon just below the splenic flexure without complete obstruction. He was put to bed and given enemas and other treat-

ment preparatory to operation. About twenty-four hours later he became worse, developed marked distention and at operation we found that the carcinomatous ulcer had perforated (perhaps due to the enemas we gave him) and of course a general peritonitis developed and the patient died.

This case illustrates how far advanced a case may be before producing enough symptoms to bring the patient to the doctor and also possibly the dangers of repeated enemas. We might have saved his life had we done a prompt cecostomy.

The second patient was a white woman, aged 61, who complained of pain in the right lower abdomen of four years' duration and a slight tendency to constipation.

A tumor the size of a large orange could be felt just above Poupart's ligament and on pelvic examination it seemed to be attached to the uterus. Her hemoglobin was only 40 per cent. At operation we found a large carcinoma of the cecum which had grown down between the folds of the broad ligament, thereby accounting for its attachment to the uterus. This tumor was resected and the patient is apparently well now, six months afterward.

The striking features of this case are the long duration of the symptom of pain and the great anemia which is frequently seen in carcinoma of the cecum and ascending colon.

The third case was a woman, aged 51, who had suffered constipation for a year, pain and a mass in her right lower quadrant for six months and had lost thirty pounds. At operation she had a large carcinoma of the cecum and also metastases in the liver. Her hemoglobin was 80 per cent. The tumor was resected and the patient was much improved.

This case is the exception to the rule in that her hemoglobin was normal in spite of the large tumor and the extensive metastases.

The first case was characteristic of the descending colon tumors which produce obstruction and perforation. The last two cases were characteristic of the ascending colon tumors which reach a large size and even metastasize without producing obstruction and usually produce more marked systemic symptoms with anemia, (in one case), loss of weight and general weakness. All three cases were far advanced when I first saw them and there is hope of permanent cure in only one of them.

After all, tumors of the colon are relatively rare and I don't believe that we keep them in mind as constantly as we should when patients forty years old and older come to us with a vague history of indigestion, constipation, loss of weight, anemia or abdominal pain. Speaking personally, I know that in each instance I was more or less surprised when the diagnosis of carcinoma of the colon was established in the three cases mentioned above. In the two women my thoughts were running much more toward the common fibroid and ovarian tumors which we see almost daily and I had given little thought to the possibility of a tumor of the bowel.

If we will remember the many excellent points brought out by Doctor Egan in his paper I am sure our patients will be better cared for.

Dr. George F. Eubanks, Atlanta: The subject has been covered very well by Doctor Egan but I wish to emphasize a few points. Irritation is a factor in the etiology of carcinoma of the colon as it is in the causation of carcinoma elsewhere in the body. We know that polyposis follows irritation in the bowel and abnormal bowel habits. So far as we know this is the most important factor in the production of carcinoma of the colon. Consequently anyone who is found to have polyposis of the colon should be operated upon. If the polyps are multiple and extend throughout the colon the sigmoid should be cleared of polyps by fulguration, an ileosigmoidostomy done, and the remainder of the colon resected.

Anemia is probably the most suggestive sign that we have in carcinoma of the right half of the colon and this anemia is out of all proportion to the amount of blood lost from the bowel. As Doctor Egan so well brought out, this anemia is due to the effect on the blood and blood forming organs of the toxins generated in, and absorbed from, the right colon. Early surgery in colon cancer generally gives good results probably second only to breast cancer in the number of cases cured. Surgery is much more valuable than any other form of treatment in cancer of the viscera if seen reasonably early. The preparation of these patients for operation by the administration of abundant quantities of fluid and building up the glucose reserve with hard candies, fruit juices and other carbohydrates is of great value in reducing the surgical mortality.

It was my privilege to work with Doctor Judd and Doctor Rankin who have done much work in this line. I believe that Doctor Rankin's obstructive resection is the operation of choice in all cases where it is applicable. The danger of malignant recurrence in the operative scar which occurred in four of Doctor Judd's cases has made him declare that he will not do the ordinary Mickulicz operation again.

Dr. W. A. Selman, Atlanta: I recently had these cases brought to mind rather forcibly, and Doctor Eubanks has already brought out the points I want to emphasize. The anemia, as has been said, is out of proportion to the other findings, which shows not only in the blood count but in the rapid heart, the debility, and the marked weakness that nothing but toxemia from malignancy will produce. I found a number of these cases years ago in operating for a supposed appendicitis. Upon opening the abdomen I would find a tumor, which I removed at the primary operation. My results were not good. Since the advantages of the two and three stage operations have been brought out my results have been better.

There are two or three things I wish to ask Doctor Egan to discuss in closing. One is in reference to treatment. I recently removed a tumor of the transverse colon which was so near a complete obstruction at the time of operation that I decided not to

do a Mikulicz operation but to resect immediately. We left an open colostomy. The patient was markedly anemic and weak and a blood transfusion was given before each step of the operation. About three weeks after the primary operation we went in and made an anastomosis between the ileum and the colon and left the colostomy as a safety valve. This took the place of the primary colostomy which I have already mentioned. At the third operation we went in under the anastomosis and resected the descending ileum and the rest of the cecum.

Another thing I want to ask about is whether Doctor Egan advises roentgenotherapy following operation. The enlarged glands in the case I mentioned were present all the way from the mesocolon to the stomach. We removed all that we could see but of course we are fearing a recurrence although we found no nodules in the liver.

Dr. Ralph H. Chaney, Augusta: There is one point I wish to bring out. Perhaps from the surgeon's standpoint to delve into the field of the roentgenologist is improper, but I have seen four cases in which carcinoma of the colon was suspected in which the barium enema showed no signs for a period of four months after the lesion was suspected. Bargen, at New Orleans, recently demonstrated a new method of showing those lesions, which they call the "contrast barium enema." The patient is given the usual barium enema, and fluoroscopic studies are made as usual. If they are very suspicious of carcinoma the barium is given to a point of desire for evacuation and they fill the bowel rapidly. The patient is allowed to evacuate the bowel, and then with a tube similar to the bulb we used to carry on the old Pacquelin cautery the bowel is refilled with air, until the cecum is outlined with air. They find that in this way malignancies stand out, the ulcers stand out in retrospect, and they showed twenty cases in which the barium enema had revealed nothing whatever but the contrast enema revealed all these lesions as well as small polyps standing up in the redundant portion of the sigmoid and two in the transverse portion of the colon that had not shown at all in the barium enema.

Dr. M. J. Egan, Savannah. (closing): I wish to express my appreciation of the generous discussion. I brought a patient whom I would like to present, if time permits. I think Doctor Selman brought up the point of the different things we may find in carcinoma of the colon. There is no text-book rule for anything. It requires surgical judgment to be able to handle these conditions as we find them, and I think the way Doctor Selman handled the carcinoma of the transverse colon shows that he has good surgical judgment. It is an operation that we seldom read of in text-books or in the current literature, and no paper can cover everything. It needs special judgment to take care of pathology that is found when we open the abdomen.

It is my belief that the graded operation has done and will do more towards the accomplishment of successful large bowel surgery than any other one thing.

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TUMOR FORMATION: PATHOLOGIC CHANGES CONSEQUENT TO INJECTION OF OILS UNDER RECTAL MUCOSA

Curtiss Rosser and Stuart A. Wallace, Dallas, Tex. (*Journal A. M. A.*, Dec. 24, 1932), found that twenty strictures of the rectum in patients who had previously received injections of oil under the rectal mucosa for hemorrhoids were made up of coalescing, firm, yellowish lumps. Sections were available from twelve; all indicated the presence of retained oil. Oil stains of five sections demonstrated vegetable oil mixed with paraffin oil in two and paraffin alone in three. Retention of injected oil and consequent fibrosis are in Texas the chief etiologic agents responsible for stricture in persons who have previously received injections. The same phenomena are apparently responsible for isolated lump formation in the rectum. Olive oil produces no special tissue irritation and is not a probable cause of oil tumor. Mineral oil did not fail to produce a tumor when injected, and the authors see no reason to indict individual susceptibility as a factor in man. Mineral oil was apparently the prime agent in the chemical strictures of their series, and they have no doubt that its tendency to produce local irritation plus its known migratory and coalescing ability is responsible. Cotton seed oil apparently holds an intermediate position as a tumefacient, the fibrosis and oil retention being definite though less marked than the reaction from paraffin oil. Phenol plays no appreciable part in the production of eleomas.

CLINICAL CASE REPORTS

POPLITEAL ANEURYSM

Case Report No. 1

*Surgical Division, Grady Hospital, Atlanta
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Doctor Rudder, Resident Surgeon: This is a negro man 40 years of age, who was admitted to the hospital yesterday because of a large painful swelling in the left popliteal fossa. In October, 1931 (eight months ago), he had pain of such severity in his left leg and foot that he had to go to bed. Three weeks later he noticed a swelling in the left popliteal region which has gradually increased in size. The pain has continued in the leg and foot, severe enough to prevent sleep.



FIG. 1

Popliteal region from behind, showing the swelling with the glistening atrophic skin.

Blood pressure systolic 160, diastolic 100. The physical examination except for the heart and left leg is negative. The heart is enlarged, and the roentgenogram shows the enlargement is largely in the left ventricle. There is a large tumor in the popliteal region of the left leg, and extending laterally and medially around the leg. It is soft and at one point the skin is thin, atrophic, and glistening, and the lateral portion pulsates. In this region a systolic bruit is heard, but there is no thrill. This bruit is obliterated on compressing the femoral artery. The circumference of the left knee is three times as great as the right. The Wassermann test strongly positive.

Doctor D. C. Elkin: This has every appearance of an aneurysm. The patient is in the aneurysm age,



FIG. 2

Sac opened and the clot protruding.

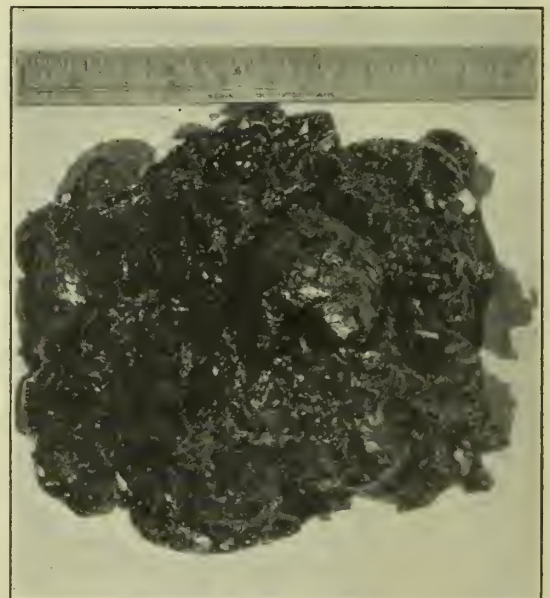


FIG. 3

The clot removed from the aneurysmal sac, measuring 12.5 cm. in diameter and weighing 1,100 grams.

the position is the most common one for the disease except the thoracic aorta, his Wassermann is positive, and the tumor pulsates. There is a history of pain in the leg due to pressure on the peroneal and tibial nerves. It is larger than the usual popliteal aneurysm, but we are seeing it late in its development and it has probably ruptured. That is to say, the original dilated arterial sac has been broken through and it is now a false aneurysm, limited by the tissues of the leg. The

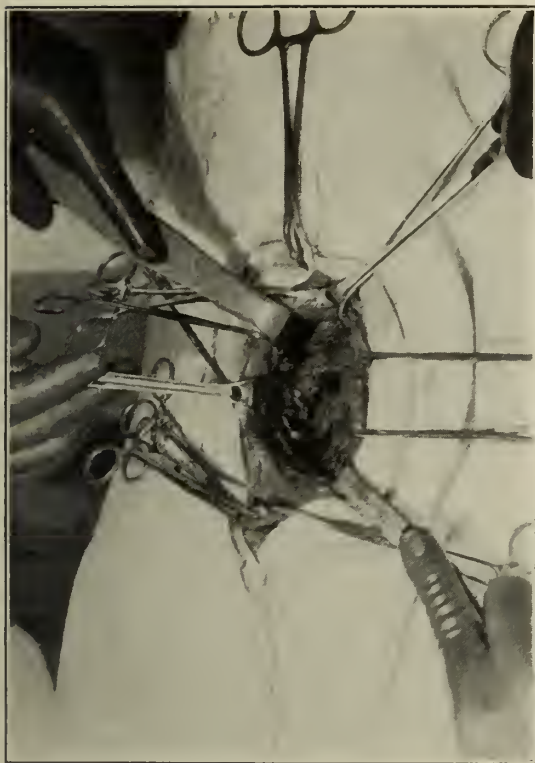


FIG. 4
Sac after removal of the clot. Extensions of the sac laterally and medially cannot be seen.

blood in it is for the most part clotted, but some of it is liquid and pulsating and in communication with the vessel. I believe an immediate operation is indicated since it may rupture through the skin at any time and result in a serious hemorrhage. A second problem is to preserve the leg; that is, to cure the aneurysm without sacrificing the circulation distal to it. The operation of Antyllus—proximal and distal ligation at the sac—might cure the aneurysm but would most likely impair the circulation. The Hunterian operation—proximal ligation at a distance in Hunter's canal—would leave the collateral circulation intact and cause clotting in the aneurysm, but absorption of the blood would be slow, and recurrence or infection likely. The entering vessel might be partially closed with a metal band—Halstead's operation—but that procedure is subject to the same objections as the Hunterian operation.

I believe the best procedure is to open the sac, close all vessels from within and obliterate the sac from within. (Matas Obliterative aneurysmorrhaphy). If the sac is thick and friable, it may be packed loosely instead of closing it. The wall of the sac will gradually come away and the wound will gradually heal by granulation.

Operation—(Dr. Elkin).

(Spinal anesthesia, Spinocaine 3 cc.) Tourniquet applied to thigh. Incision, longitudinal, 15 cm. long, is made directly over the middle of the popliteal fossa. The sac is encountered just beneath the skin and



FIG. 5
Patient six weeks after operation. Swelling has disappeared and the wound closed.

opened. About 1,000 cc. of "current jelly" clot is removed and the sac washed clean with saline solution. The vessel opening in the sac cannot be seen but when the tourniquet is temporarily removed it is found at the bottom of the sac. The opening is about 1 cm. long and is obliterated with two running sutures of chromic catgut. There are no other openings and the tourniquet is removed. The sac is thick and friable and if obliterated with sutures there would be great danger of injuring other vessels or nerves. It will, therefore, be packed lightly with vaseline gauze.

Subsequent Notes—(Dr. Rudder).

June 24, 1932. There is no swelling of the foot. The blood supply is adequate. There is no evidence of nerve injury. No hemorrhage.

June 30, 1932. Vaseline gauze packing removed and replaced. No hemorrhage.

August 1, 1932. Wound has been dressed daily; the packing removed and replaced with smaller gauze. The wound has granulated completely, and the patient discharged from the hospital. Since the operation he has had antisyphilitic treatment, bismuth sodium tartrate, 0.03 gm., every four days, and saturated solution of potassium iodide, 30 minims, three times a day. He will continue this treatment in the Out-Patient Department.

Nov. 1, 1932. The patient has returned to work. He has been seen once a week since leaving the hospital and has continued the antisyphilitic treatment. The circulation of his leg is good, with no pain or swelling.

PAPILLOMA OF THE RECTUM*

Report of Case

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The average patient frowns down upon even the suggestion of a rectal examination unless he or she has been a sufferer for months or years. The medical profession should give wide publicity to information concerning rectal ailments so that the laity will make it fashionable to seek early advice and examination. It is only in this way that more lives may be saved by the early recognition of beginning malignancy in the rectum.

How many of us ever see diseases of the rectum in their early stages?

General practitioners as a class do not seem to realize that the rectum may be the seat of benign and malignant tumors and the cause of a multitude of body ailments. Perhaps all of us who have been in practice long enough have had one or more patients go to a thorough doctor for an examination and this doctor has found a diseased rectum begging for diagnosis and treatment. The high incidence of rectal disease is an unanswerable argument in favor of always including the rectum in our examinations.

Papillomas or villous tumors of the rectum vary in size from a nodule the size of a pea to a growth several inches in diameter. They are rarely pedunculated and usually have a broad, sessile attachment. When placed in water its wavy villous prolongations float. The surface may be finely lobulated with typical microscopic papillomatous structure. It is red in color and of soft sponge-like consistency with no induration at its base or attachment. This tumor does not recur after removal as often as laryngeal or bladder papilloma.

The connective tissue framework branches and rebranches and is covered with a high or columnar type of epithelium. At the point of attachment or base adenomatous elements often are found. Between 15 and 20 per cent become malignant or are malignant when observed and should be classified as precancerous lesions.

Practically all papillomas are found in adults and among the symptoms are bleeding at time of bowel movement or sometimes spontaneous hemorrhage. If the tumor is low it may prolapse with every bowel movement. A true prolapse of the bowel may occur. Patients suffering with papilloma may pass large or small amounts of mucus many times

a day on account of the large secreting surface of the tumor and such a symptom is most disagreeable and annoying.

Papillomata should be removed or destroyed. If the tumor is easily reached it should be removed by dissecting through healthy mucosa and submucosa down to the rectal wall. When the tumor is high up in the rectum and cannot be prolapsed through the anus probably the best treatment is destruction by fulguration through the proctoscope.

Of course malignancy must be treated in a radical way similar to the treatment used in cancer of the rectum.

About seventy-five of these tumors have been reported in the literature.

Report of a Case

The patient was a woman, 42 years old. She gave a history of prolapse of a soft mass during each bowel movement over a period of five years. This mass which she called a hemorrhoid and which was called by the same name by various doctors whom she had consulted had gradually reached a size large enough to give her considerable annoyance, having always to be reduced or returned back into the rectum after each bowel movement. She complained of an ever present quantity of mucus which stained her garments, and bleeding at times after bowel movement and sometimes spontaneous hemorrhage from the rectum. The mass had become so troublesome that she became nervous and was practically always conscious of it.

A red spongy mass was felt low down on the right wall of the rectum and attached to it by a rather broad sessile-like base. The examining finger was hooked around the mass which was easily prolapsed through the anal opening and protruded 2 inches from the muco-cutaneous line or junction.

Operation was performed under general anaesthesia. After dilatation of the sphincters the tumor was resected by incising through healthy mucosa down to the rectal wall (muscle) taking care not to penetrate the wall during removal of the tumor. An accident of the latter kind would be disastrous in case the tumor was situated rather high in the rectum on account of the danger of opening the peritoneum on the surface of the lower bowel, which would cause a fatal peritonitis.

The patient made an uneventful recovery and was dismissed from the hospital ten days after the operation.

In order to accomplish a rapid disappearance of thrombophlebitic edema in the lower extremities, the following principles of treatment are systematically employed by Geza de Takats, Chicago (*Journal A. M. A.*, Jan. 7, 1933): maximal elevation of the affected limb; restriction of fluid and salt intake, and repeated injections of a mercury diuretic salyrgan, with adequate premedication. Later, gradual exercise and massage are started, the object now being to prevent reformation of the edema. This management, however, is effective only at the time when the edema appears and is hardly effective in the chronic fibrosis.

*Read before the Eighth District Medical Society, Madison, Ga., August 10, 1932.

THE TREATMENT OF LOBAR PNEUMONIA WITH CARBON DIOXIDE AND OXYGEN

J. Fletcher Hanson, M.D., and Abner W. Calhoun, M.D., Atlanta, report 27 cases of lobar pneumonia treated with carbon dioxide and oxygen in the *Archives of Internal Medicine*, August, 1932, Vol. 5, p. 269.

The rationale of using inhalations of carbon dioxide and oxygen in the treatment of lobar pneumonia began with the work of Henderson and Haggard in 1920. These observers showed that carbon dioxide is nature's own stimulant of the respiratory center and that when given to patients who survived gasing, post-asphyxial pneumonia practically never developed.

From 1920 to 1930 various observers, through animal experimentation demonstrated that pneumonia is essentially a pneumococcic lobar atelectasis, brought about by plugging the bronchi by an excessive and sticky secretion which shuts off the portion of the lung to which the bronchus leads. As air in the involved part becomes absorbed atelectasis develops, secretions accumulate back of the occlusion and consolidation follows. Hyperventilation of the lungs through the use of carbon dioxide with oxygen as a medium tends to remove these bronchial plugs and to areate the atelectatic area thereby providing an avenue.

Twenty-seven patients suffering from early lobar pneumonia were treated with inhalations of 5 per cent carbon dioxide and 95 per cent oxygen. There were two deaths.

So far as we could determine, inhalation of carbon dioxide and oxygen in this concentration is accompanied by no harmful effects.

The dosage and method of administration should be investigated further, before inhalation of these gases is advocated for practical use in the treatment of pneumonia.

INFARCTS OF KIDNEY

J. Dellinger Barney and E. Ross Mintz, Boston (*Journal A. M. A.*, Jan. 7, 1933), summarize some of the results of their investigation on infarction of the kidney. From the purely clinical point of view, renal infarction may occur in either sex and at almost any age, but especially between the thirtieth and fiftieth year. It is most often not associated with fever, urinary symptoms, nausea and vomiting or pain, and the urine is normal or essentially so in well over one-third of the cases. If pain and tenderness are present, they may be indicative of a complete infarction of the kidney. On the other hand, these symptoms may so closely simulate those associated with many other acute abdominal conditions that it may be extremely difficult or even impossible to differentiate the two. It is important to keep in mind at least the possibility of a renal infarct and to remember that this suspicion will be greatly strengthened if the patient is also suffering from endocarditis, especially of the chronic fibrous type with hypertrophy and dilatation of the heart and extensive arteriosclerosis. It is also well to remember that almost any severe type of septicemia may give

rise to infarcts. It has been shown that vessels other than those supplying the kidney are not infrequently the seat of thrombi, and that in many cases a number of different portions of the vascular system may be simultaneously involved. This study warrants the opinion that no rule can be laid down as to definite diagnostic symptoms, except to say that in many instances a complete lack of symptoms and signs pointing to the kidney may make it impossible to detect renal infarcts. That many may occur without symptoms and recover spontaneously is well shown by certain cases in this series and by the spontaneously is well shown by certain cases in this series and by the observations of others. The authors also believe that it is impossible to formulate any reliable prognostic rules. It is not the renal infarction per se that kills; it is rather the endocarditis, arterio-sclerosis, sepsis or phlebitis which determines not only the infarct, but even the outcome itself. In giving a prognosis, one must, therefore, keep this most important point in mind. And by the same token one must also remember that even an apparently small degree of endocarditis or of sepsis may result as disastrously as one of a more pronounced character. Generally speaking, one can say that any patient who has the conditions favorable for the formation of infarcts of the kidney has a poor outlook. What has been said about prognosis applies equally well to treatment. No rule can be laid down. If one is sure of one's diagnosis of renal infarction, nephrectomy may be advisable or even necessary. The infarct that cannot be diagnosed during life will probably take care of itself. Much more important is the treatment of those conditions which favor the formation of infarcts. But here, also, most of these conditions are of a chronic and generally incurable character, and therefore treatment is as difficult and unavailing as an opinion of prognosis is to formulate.

ECLAMPSIA WITHOUT CONVULSIONS TERMINATING IN CEREBRAL APOPLEXY

Arthur G. King, New Orleans (*Journal A. M. A.*, Jan. 7, 1933), reports the case of a pregnant woman, aged 19, dying at term of cerebral apoplexy. Syphilis and arteriosclerosis can apparently be ruled out. She had no prodromes of any sort and the diagnosis was made on the hypertension, albuminuria and suddenness of onset in a pregnant woman. There were no convulsions, but the pathologic condition was identical with that of eclampsia. For want of a better term, and conforming to the usage by many authors, this case is described as "eclampsia without convulsions." It takes its place with forty-three other such cases reported in the literature and reviewed by the author, and its termination in massive cerebral hemorrhage finds a counterpart in at least eight of these. This tragic complication reveals the insidious but, more important, the protean nature of the "toxemias of pregnancy" and the need of careful study for the prevention, diagnosis and treatment.

THE JOURNAL

OF THE
MEDICAL ASSOCIATION OF GEORGIA
 Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

JANUARY, 1933

INFANT FEEDING

There exists today no more fads and superstitions in any other field of medicine than in the feeding and rearing of infants. A baby's formula is looked upon by the laity as something extremely complicated, and occasionally physicians who do not treat infants have this same feeling. A pediatrician's duty to his patients who are in good health is largely educational, supervising their hygiene and surroundings and advising them as to proper diet.

Breast feeding is being practiced more conscientiously at the present time than perhaps in any time of civilization. Only in rare instances do women fail to nurse their babies when it is possible for them to do so. At times we are unjustly criticized for weaning babies when we are in no way to blame. Then again, some women are so conscientious and industrious in caring for the baby that it becomes wise to suggest short vacations away from the daily routine of nursing.

Foods other than breast milk are being given earlier than formerly. A rapidly growing breast-fed child should be allowed other foods earlier than an infant more nearly average size. The addition of cereals, eggs, cooked fruits, vegetable and meat juices, toast, butter, etc., will result in a stronger, more muscular child than the fat, flabby breast-fed infant. The addition of more milk may not be required until later. It may even be advantageous to give these foods before nursing, so that in this way the amount of breast milk may be restricted. On the other hand, no hesitancy should be felt in supplementing an insufficient supply of breast milk. The usual procedure is to dilute the milk of animals, as the cow, and to add carbohydrate in some form, thus approximating the amount of protein, fat and carbohydrate in human milk.

The affects of an infant's diet may be either immediate or remote. A child may be fed unsuitable food that causes a temporary gastro-intestinal upset or food that is contaminated with bacteria, as the dysentery bacillus, the typhoid bacillus; or food may be lacking in certain elements, causing more remote conditions, as rickets, scurvy, anemia, etc. I think we all agree at the present time

that no infant should take any milk that is not sterilized in some way. Boiling is the usual procedure in the home. Many of us feel that all milk should be properly pasteurized. If the source of cow's milk is not above suspicion or if the infant has an enfeebled digestion, canned milk may be used. Certain canned milks have these two advantages, that they are sterile and that in the process of cooking they are rendered more easily digestible.

Fortunately, the usual baby foods contain enough vitamins not to have to supply them out of a can, some of the present-day advertising notwithstanding. Eggs, milk, vegetables, fruits, and animal fats are rich in vitamins. The two most common diseases caused by lack of vitamins are rickets and scurvy. The anti-scorbutic vitamin in cow's milk is destroyed by heat, so that a raw food, usually orange juice, is added to the diet when cooked milk is taken over a long period of time. We feel that all children should be treated prophylactically for rickets and that if enough attention is paid to diet, sunshine and cod liver oil, most rickets can be prevented. Due to the use of eggs, milk and vegetables in the present-day diet, keratomalacia and polyneuritis are rare diseases.

A few babies have idiosyncrasies to certain foods. These individuals constitute true feeding problems and it is fortunate that they are few in number. The more important manifestations of this condition in children are eczema, asthma and urticaria. Less frequently, hay fever and intestinal or urogenital conditions are observed. Occasionally a severe eczema will become ameliorated by simply leaving oatmeal out of the diet. Not infrequently the first feeding of egg may cause alarming symptoms. Unfortunately some individuals who react to foods in this manner react to more than one food so that the problem becomes more acute.

Habits of eating and digesting are markedly influenced by psychological problems in the household. Growing children should not be associated with nervous or sick people, particularly at meal-time. The example of a "choosy" grown-up, who can't eat this and doesn't like that, is bound to react on a child. Food should not be urged upon the child. I wish that every infant and older child could know for a rather prolonged time what hunger means. Whenever we see a child not thriving, who is getting the required amount of exercise, hygiene and proper diet, we should try to seek out some problem in the home.

WM. WILLIS ANDERSON, M.D.



MORRIS FISHBEIN, M.D., Chicago, Ill.
Editor of the *Journal of the American Medical Association*

Dr. Morris Fishbein, of Chicago, Editor of the *Journal of the American Medical Association*, will address the joint session of the Institute of Citizenship and Georgia Press Institute at Glenn Memorial Church on Thursday night, February 9th, at 8:15 o'clock. He will also hold a "round table" on Friday morning, February 10th, at 11:15 o'clock. Dr. Fishbein graduated at Rush Medical College in 1912 and has been connected with the *Journal of the American Medical Association*, of which he is now the editor, since 1913. He is also editor of *Hygeia*, the health magazine, published by the American Medical Association. He is an internationally known writer and lecturer on medical and public health subjects. Emory University Press-Citizenship Institute is very fortunate in being able to secure him for this session. Members of the Medical Association of Georgia, their families and friends are cordially invited to be present at Dr. Fishbein's lecture on Thursday night, February 9th, at the Glenn Memorial Church on the Emory University campus.

Joint Session
INSTITUTE of CITIZENSHIP
and
GEORGIA PRESS INSTITUTE

EMORY UNIVERSITY
ATLANTA, GEORGIA
February 7th-11th, 1933

The general theme of the Sixth Annual Institute of Citizenship, which will be held at Emory University February 7th-11th, 1933, is "The Press and Public Opinion." So significant is this topic, particularly at the present time, that the Georgia Press Association has accepted an invitation to hold its 1933 Georgia Press Institute in conjunction with the Institute of Citizenship. Committees from both Institutes are co-operating to arrange a program which should be most interesting and helpful.

Headed by President-Elect Franklin D. Roosevelt, who has been invited to open the Institute on Tuesday, February 7th, the tentative list of speakers includes Hon. O. Max Gardner, governor of North Carolina; Dr. Howard W. Odum, editor of *Social Forces*; Charles Stephenson Smith, chief of the foreign service of the Associated Press; Dr. Morris Fishbein, editor of the *Journal of the American Medical Association*; Dr. Charles Pergler, European diplomat, and Dr. Harold Gosnell, of the University of Chicago, together with many of the leaders in Georgia journalism and public affairs.

Sub-topics to be discussed will include "The Need for an Intelligent Interest in Public Affairs," "The Need for an Intelligent Leadership in Public Affairs," "Political Systems of America and Europe," "The Future of the Democratic Party," "The Press and International Relations," "Public Opinion and Health," "Public Opinion on Problems of Municipal, State, and National Government," and "Changing Methods in Newspaper Work."

All sessions of the Institute will be open without charge to those interested. While the entire program will appeal to newspapermen, certain topics of vital interest to the press have been grouped in the period beginning Wednesday evening and closing Friday evening.

The Institute of Citizenship

The Institute of Citizenship was established at Emory University during the 1927-28 term in recognition of the University's responsibility for the dissemination of knowledge in the field of public affairs and as a contribution to the creation of an informed public opinion. Its inception was due to

Professor Cullen B. Gosnell of the Department of History and Government, who, while a member of the faculty of Furman University, had organized the first institute of public affairs to be held in the South.

In the six years of its existence, the Institute of Citizenship has become firmly established as one of the most important and effective gatherings of its kind in the United States. It was made possible and has continued to operate through the generous contributions of public-spirited citizens. One of the greatest factors in its success, however, has been the services of distinguished scholars, public officials, and newspapermen from all parts of the United States, Europe, and Cuba.

Attendance at the Institute from all parts of the Southeast is increasing and it seems quite clear that the need for such a conference is being more and more widely recognized and that the contributions of the Institute are meeting a wider and wider public demand. The support of all who are interested in the promotion of a sounder and a wider knowledge of public problems and in the efforts of the Institute to serve in that connection is earnestly solicited.

The Georgia Press Institute

The Georgia Press Institute was established in 1928 by the Georgia Press Association. The idea of the Institute was conceived by Miss Emily Woodward of Vienna, Ga., who at that time was president of the Association and editor of the *Vienna News*. The first session of the Institute was held at Mercer University, Macon, and subsequent sessions have been held at the University of Georgia, Athens, and at Emory University, Atlanta.

The Institute is designed to assemble practising newspaper men and women, teachers of journalism and their students, leaders in public affairs, and others in related fields for addresses, lectures, and round-table conferences on subjects of contemporary interest to the press.

The Institute of Citizenship is supported entirely by the voluntary contributions of its friends. All of its sessions are open to the public without charge. There is no registration fee.

Gifts of any amount will be welcomed. Contributing members are entitled to receive a copy of the published proceedings.

Reduced Railway Fares—Those coming to Atlanta by rail for the 1933 Institute should ask for an Identification Certificate when purchasing their tickets. This will entitle them to a fare of one-half the regular rate for the return trip, provided as many as 100 persons use the railroad.

Inquiries should be addressed to the Director, Dr. Cullen B. Gosnell, Emory University, Ga.

PRESIDENT'S MESSAGE

To the members of the medical Profession in Georgia:

I wish every doctor in Georgia could or would be a member of the Medical Association of Georgia. Sixty cents per month or less than two cents a day is not much money. Most of us smoke, chew or drink more than this amount.

Although we are pulling through a depression, I hope that we will have an excellent attendance at our next annual session to be held at Macon, May 9, 10, 11, 12. I believe that I have been benefited by every medical meeting I attended. I hope for at least a normal attendance at the Macon meeting.

I wish for every doctor in Georgia a happy and prosperous New Year.

MARVIN M. HEAD, M.D.
President.

FREE MEDICAL SERVICE

The Executive Committee of the Medical Society of the State of North Carolina passed the following resolution on January 10th:

"WHEREAS, the economic conditions have increasingly gone from bad to worse, thereby increasing many fold the needs and demands for free medical service, and

"WHEREAS, the doctors of the state have carried this enlarged charity as long as they can in many sections, and

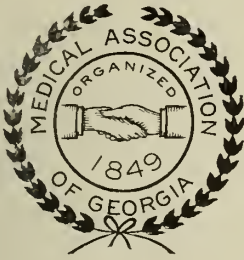
"WHEREAS, relief from illness is the highest type of human relief and all other needs are cared for with supplies and service paid for,

"THEREFORE BE IT RESOLVED: That it is the opinion of the Executive Committee of the Medical Society of the State of North Carolina that sufficient funds should be allocated at once in every county in this state to aid the doctors in a large measure to carry this greatly increased burden of caring for the indigent sick.

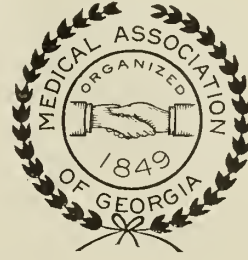
"BE IT FURTHER RESOLVED: That a copy of this preamble and resolution be sent to the State Director of Relief."

The Medical Association of Georgia will hold its Eighty-Fourth annual session at Macon, May 9, 10, 11, 12.

The first meeting of the House of Delegates will be held in the afternoon of May 9th.



2 CENTS PER DAY* BUYS



-
1. Membership in the *Medical Association of Georgia*.
 2. Membership in the *American Medical Association*.
 3. Subscription to *The Journal of the Medical Association of Georgia*.
 4. *Medical Defense*—the best and cheapest insurance in the world..
 5. The privilege of attending and participating in all meetings of the *Medical Association of Georgia*—an annual postgraduate course for Georgia doctors.
 6. The satisfaction of knowing that you are doing your share in carrying on the work of the great profession to which you are devoting your life and talents.
 7. A vacation from saving the two cents daily for 15 days each year.
-

Lives there an eligible doctor in Georgia who cannot afford so little for so much?

*A Georgia doctor's family of five dropped their pennies in a box during 1932. From this they have paid father's dues to the *Medical Association of Georgia*; mother's dues to the *Woman's Auxiliary, P.-T. A. and Club*; dues of son and daughters to *Fraternities and Societies*; and made a substantial contribution to charity. (Authentic story.—Editor.)

Send check for 1933 dues to the secretary of your county society today.

ALLEN H. BUNCE, M.D.
Secretary-Treasurer

139 Forrest Avenue, N.E.
Atlanta, Georgia

RADIO WAVES

Sixth Edition

- "This year we need more work for the Medical Association of Georgia."—*Head*.
- "The greatest assets of the medical profession are the men in it—let's take care of them."—*Richardson*.
- "We all make mistakes, but let's not make the same mistake twice."—*Morrison*.
- "Failing in early life to do the things we know best,
Will lead us into old age with much work and little rest."—*Garrison*.
- "Bluff might start you on the road to success, but only merit can keep you there."—*Simmons*.
- "The most for the least—two cents per day for membership in the Medical Association of Georgia."—*Bunce*.
- "The want of zeal in our profession is the surest sign of its decay."—*Myers*.
- "This truth within your mind rehearse,
To talk hard times will make times worse."—*Redfearn*.
- "Recognize and patronize the Journal's advertisers."—*Roberts*.
- "Is the doctor in? Yes. W. A. Selman broadcasting."—*Selman*.
- "During such periods of economic distress it is a test of loyalty to every physician in the high ideals of the medical profession."—*McCord*.
- "Let us hold fast the profession of our faith without wavering."—*Fullilove*.
- "The building of small county hospitals in many of the smaller towns would aid greatly in solving the maternity problem."—*Ayers*.
- "An old thought, but a worthy one, is that troubles which appear very great today, will likely assume such insignificance in the future that they will be scarcely remembered a few months or a year hence."—*Lewis*.
- "May useful work in the past be a happy stimulus."—*Wall*.
- "Use artificial pneumothorax more often in pulmonary tuberculosis. There are no important contraindications."—*Bancker*.
- "A doctor's scientific attitude is more a matter of his mind than of his laboratory facilities."—*Blackford*.
- "The medical profession should be conservative in making radical changes affecting the time honored principles of medical ethics and economics."—*Dougherty*.
- "Let us unite our efforts to give the state board of health medical rather than political control."—*Massee*.

THE SOUTHEASTERN SURGICAL CONGRESS
ANNOUNCES ITS FOURTH ANNUAL
ASSEMBLY

ATLANTA BILTMORE HOTEL, ATLANTA

March 6, 7 and 8, 1933

The following prominent surgeons and internists will appear on the program:

Dr. Tom G. Orr, Kansas City—"The Essential Factors in the Treatment of Acute Peritonitis".

Dr. Walter E. Sistrunk, Dallas—Subject to be announced later.

Dr. C. W. Roberts, Atlanta—"Congenital Anomalies of the Ileocolic Area of the Bowel".

Dr. Geo. W. Crile, Cleveland—"Peptic Ulcer—Lantern Slides".

Dr. W. D. Haggard, Nashville—"Toastmaster".

Dr. Chevalier Jackson, Philadelphia—"Diverticula of the Esophagus and Hypopharynx. Lantern and Motion Picture Demonstration".

Dr. Charles Bagley, Jr., Baltimore—"Neurological Surgery—Its Beginning, Progress and Present Status".

Dr. W. E. Lower, Cleveland—"The Various Functions of the Testes; an Experimental and Clinical Report".

Dr. Hugh Cabot, Rochester—"Nephrostomy in Theory and Practice".

Dr. Hubert A. Royster, Raleigh—"Sidelights on the Pathology of Appendicitis".

Dr. E. W. A. Ochsner, New Orleans—"The Relative Value of Sclerosing Agents in the Treatment of Varicose Veins".

Dr. Dean Lewis, Baltimore—"Muscles, Nerve and Blood Vessel Injuries of the Extremities".

Dr. Carl A. Hedblom, Chicago—"The Diagnosis and Treatment of Tumors of the Thorax".

Dr. W. Wayne Babcock, Philadelphia—"The Vaginal Approach to the Peritoneum".

Dr. W. R. Houston, Augusta—"The Need of Action".

Dr. Curtice Rosser, Dallas—"Problems Confronting the Proctologist".

Dr. Irvin Abell, Louisville—"Tumors of the Breast".

Dr. Robert Wilson, Charleston—"The Fundamentals of Surgery—A Medical Viewpoint".

Dr. Cecil Rigby, Spartanburg—"The Etiology and Treatment of Leukorrhea".

Dr. Russell O. Lyday, Greensboro—"Surgical Progress from a Physiological Standpoint".

Dr. Vilray P. Blair and Dr. James Barrett Brown, St. Louis—"Cancer of the Mouth".

Clinics will be held also. The complete program will be mailed out about February 15, 1933. Watch for the program and prepare to attend.

B. T. BEASLEY, M.D.,
Secretary-Treasurer.

COST OF MEDICAL CARE

Resolution

THE GEORGIA MEDICAL SOCIETY

At a special meeting of the Georgia Medical Society, held December 20, 1932, for the purpose of considering the Final Report of the Committee on the Cost of Medical Care, the following resolution was adopted:

WHEREAS, this Society recognizes its limitations in coping with the many intricate problems connected with the rendering of medical service, and

WHEREAS, it has always been ready to adopt and now welcomes any innovation tending to improvement in the care of the sick, and

WHEREAS, the recently published Final Report of the Committee on the Cost of Medical Care is partisan, unfair and inimical to the best interests of the medical profession, and not to the best interests of the public at large, and

WHEREAS, to put its recommendation into operation would be to socialize medical service in the United States, and to eliminate much of the stimulus to progress, and

WHEREAS, the Majority Report is made almost exclusively by laymen, institutional workers, philanthropists, and industrialists, and

WHEREAS, the Minority Report is made by those largely representing the rank and file of the medical profession:

Be It Resolved: That the Georgia Medical Society rejects the report of the Majority and endorses the report of the Minority, and that a copy of this resolution be sent to the Secretary of the Medical Association of Georgia and that another be sent to the Secretary of the American Medical Association.

ROBERT DRANE, M.D., *President,*
Georgia Medical Society.

Savannah, Georgia.
December 21, 1932.

ANNOUNCEMENT

The reports of the clinico-pathologic conferences at the Massachusetts General Hospital, usually conducted by Dr. Richard C. Cabot, have been published over a number of years. These have attracted wide attention and have done much to advance the medical education of physicians all over the United States. They have represented an adaptation (though perhaps they preceded in point of time) of the "case system of teaching" so generally adopted in the law schools of the country. And these reports are always interesting.

Inspired by this example, the *Journal* is beginning in this number a series of similar case-reports. The first ones come from the medical schools of Emory University and of

the University of Georgia. Reports worked up in similar vein from any hospital in the state will also be considered with interest. As long as the members of the Medical Association of Georgia are interested, the series will be continued but apathy or disapproval will stop it promptly.

INDICATIONS FOR PNEUMOTHORAX

1. Unilateral tuberculosis. Most suitable are: (a) Parenchymal subclavicular lesions; (b) Progressive unilateral disease which has not yielded to the usual treatment; (c) Unilateral cavity formation of 2 cm. or more.
2. Profuse, uncontrollable hemorrhage.
3. Bilateral cases with an extensive progressive lesion with minimal involvement in contralateral lung.
4. Far advanced lesions for comfort of patient.
5. Centrally located lung abscesses with good bronchial drainage, if not of too long standing, are amenable to artificial pneumothorax.
6. Unilateral bronchiectasis. Probably not curable, but sputum decreased, sepsis lessened, patient more comfortable and life prolonged.
7. Certain bilateral cases of pulmonary tuberculosis for selective pneumothorax.
8. Spontaneous pneumothorax in pulmonary tuberculosis should be maintained.
9. Pyopneumothorax. Frequent with-drawal of pus and replacement with air.

Contra-Indications for Pneumothorax

1. Dense pleural adhesions.
2. Severe cardiac disease.
3. Ulcerative intestinal lesions.
4. Extensive bilateral disease.
5. Fibroid type.
6. Rapid ulcerocaseous lesions with mixed infections.
7. Recurring type of tuberculosis on account of sclerosis of lung.

For Discussion

Pregnancy, diabetes, laryngeal lesions, (An occasional case of pregnancy and diabetes may be much better controlled and life prolonged. Laryngeal lesions are frequently responsive to treatment by collapse.)

C. C. AVEN, M.D.

Atlanta

Treatment by Partial Ligation of Internal Carotid Pulsating Exophthalmus. J. L. Campbell, M.D., and J. D. Martin, M.D., J. A. M. A., Nov. 12, 1932, Vol. 99, p. 1683.

Eight months after an injury to the back of the head, this patient exhibited pulsating exophthalmus on the right. Operation gave immediate relief. Five years later the patient returned on account of appendicitis. The right eye was still more prominent than the left, but there were no other signs or symptoms.

ARACHNOIDISM

Case Report

H. M. TOLLESON, M.D.

Hahira

On August 14, 1931, a man, aged 75, went out to an outdoor toilet at 6:00 A. M., brushed away some spider webs and sat down. While sitting on the seat he felt a stinging sensation on his scrotum which persisted and upon investigation he observed a small red bump.

I saw him two hours later and found him to be acutely ill. He was highly nervous, anxious, and in severe pain. There were cramp-like pains in the epigastrium, chest, and lower extremities. The abdominal pain was so severe as to cause the patient to roll from side to side and groan as if in agony. The pain in the chest was sufficient to cause considerable embarrassment of respiration.

The abdomen was rigid, truly board-like. The temperature was normal, the pulse rate and respiration rate were increased. The scrotum was contracted to about one-fourth its natural size and the testes were retracted up the inguinal canals so as to be barely palpable. On the scrotum was seen a very small red papule and strangely enough there was very little tenderness or pain associated with the scrotum or testicles.

Repeated doses of pantopon were given hypodermically with luminal by mouth, hot enemata, and salts. The symptoms persisted for about 36 hours when the abdominal rigidity began to subside and the patient was able to be fairly comfortable without opiates. He remained in bed four days after which he felt well except for a partial suppression of urine and a very obstinate constipation, both of which persisted for about a week. The only lasting after effect was a peripheral neuritis involving the fingers of the left hand which persisted several weeks.

The term Arachnoidism is derived from the word Arachnoidea, a class of arthropods including spiders, mites, and ticks, and means the condition produced by the bite of a poisonous spider. According to Dr. Jesse H. York,¹ who reviewed the literature only about 175 cases have been reported by about 40 physicians over the southern half of the United States. The causative spider is the *Lactrodectus Mactans* and is probably the only really poisonous spider in this country. It has been proven that the poison is distributed to the muscular system of the body through the lymphatic system. The California Indians formerly used these spiders for the manufacture of poison for arrows.

The cases reviewed showed certain characteristics in common with the cases reported here. Most bites occurred in the late evening or early morning of the autumn or summer. The mode of onset and progress was very much as in the case described. The abdominal symptoms have led many cases to surgery, as in one case reported from Grady Hospital who was operated upon in spite of the history of spider bite because of

the abdominal rigidity, pain and increase in leukocyte count. Many diagnoses have been made, from pancreatitis to ruptured viscera. At operation the abdominal organs were found to be in normal condition and except for the inconvenience of the exploratory operation, the patients made uneventful recoveries in the usual three or four days.

The accepted therapy seems to be in general, morphine for pain, sedatives for nervousness, stimulants when necessary for shock, and when not contraindicated as in the case here reported, magnesium sulphate intravenously. In a few large hospitals blood has been taken from convalescent patients, the serum recovered and saved for use in further cases. There has been too little use of this convalescent serum to draw conclusions of value at this time, and the procedure in private practice is of course impractical.

It is interesting to note the fact that it is always the female spider which bites and in case one is tempted to sit on outdoor toilet seats in the early morning, where spiders are present it is always wise to at least determine the sex of same before performing that function so necessary to elimination of intestinal toxins.

1. York, Jesse H.: Arachnoism. Bulletin of the Fulton County Medical Society, Vol. 5. No. 20. October 15, 1931.

Right Aortic Arch, Clinical Report of a Case with Associated Anomalies. L. Minor Blackford, M.D., Tom F. Davenport, M.D., and Robert H. Bayley, M.D., *Am. J. Dis. Child.*, October, 1932, Vol. 44, p. 823.

Shortly after the 13 mm. stage, the left dorsal aorta or the left forth aortic arch may be obliterated. If this occurs in a considerable segment before the atrophy of the distal part of the right dorsal aorta, the right dorsal aorta remains patent on account of the force of the blood stream. If the right aorta has disappeared and the atresia is sharply localized just distal to the mouth of the ductus arteriosus, coarctation of the aorta (adult type) results. For reasons that cannot be explained on either etiologic or physical grounds at this time, occasionally there is arrest of embryologic processes resulting in persistence of both aortic arches. There have been reported approximately a hundred cases of right aortic arch; some alone, some with an obliterated left arch and some with a patent left arch. If there is no associated lesion, such abnormal development is not likely to impair the health or longevity of its subject. It is possible to make an absolute diagnosis of right aortic arch in life, but it does not seem possible to exclude persistence of a vestige of the left arch.

A case is reported of right aortic arch in a boy 10 years of age at the time this article is written, who has been under our care since infancy. The aorta is unusually wide at its origin, probably because it receives blood from both ventricles. The aorta arches over the right main bronchus and descends for the greater part of its intrathoracic course on the right of the vertebral column. In addition, we believe that the ductus arteriosus is patent.

COUNTIES REPORTING FOR 1933

*Georgia Medical Society
(Chatham County)*

The Georgia Medical Society announces the following officers for 1933:

President—Drane, Robt., Savannah.
President-Elect—Levington, H. L., Savannah.
Vice-President—Dunn, L. B., Savannah.
Secretary-Treasurer—Schwalb, Otto W., Savannah.

Cobb County Medical Society

The Cobb County Medical Society announces the following officers for 1933:

President—Haygood, G. F., Marietta.
Vice-President—Fowler, A. H., Smyrna.
Secretary-Treasurer—Crouch, Henry W., Marietta.
Delegate—Lester, J. E., Marietta.
Alternate Delegate—Elder, C. D., Marietta.
Censors—J. W. Ellis, W. M. Gober and R. W. Fowler.

Habersham County Medical Society

The Habersham County Medical Society announces the following officers for 1933:

President—Chandler, W. V., Baldwin.
Vice-President—Duckett, P. Y., Cornelia.
Secretary-Treasurer—Harden, O. N., Cornelia.

Hall County Medical Society

The Hall County Medical Society announces the following officers for 1933:

President—Cheek, Pratt, Gainesville.
Vice-President—Meeks, J. L., Gainesville.
Secretary-Treasurer—Garner, W. R., Gainesville.

Ware County Medical Society

The Ware County Medical Society announces the following officers for 1933:

President—Witmer, C. A., Waycross.
Vice-President—DeLoach, A. W., Waycross.
Secretary-Treasurer—McCullough, K., Waycross.
Delegate—Stephens, C. M., Waycross.
Alternate Delegate—Hafford, W. C., Waycross.

Tri Society (Calhoun, Early, Miller)

The Tri Society announces the following officers for 1933:

President—Gunter, G. O., Blakely.
Vice-President—Hays, W. C., Colquitt.
Secretary-Treasurer—Shepard, W. O., Bluffton.
Delegate—Sharp, C. K., Arlington.
Alternate Delegate—Shepard, W. O., Bluffton.
Censors: C. R. Barksdale, C. K. Sharp and J. G. Standifer.

Terrell County Medical Society

The Terrell County Medical Society announces the following officers for 1933:

President—Chappell, Guy, Dawson.
Vice-President—Lamar, Lucius, Dawson.
Secretary-Treasurer—Thomas, Logan, Dawson.
Delegate—Kenyon, S. P., Dawson.

Lowndes County Medical Society

The Lowndes County Medical Society announces the following officers for 1933:

President—Quillian, E. P., Clayattville.
Vice-President—Owens, B. G., Valdosta.
Secretary-Treasurer—Crozier, Gordon T., Valdosta.
Delegate—Turner, W. W., Nashville.
Alternate Delegate—Burns, D. L., Valdosta.

Spalding County Medical Society

The Spalding County Medical Society announces the following officers for 1933:

President—English, R. E. L., Experiment.
Vice-President—Hunt, K. S., Griffin.
Secretary-Treasurer—Copeland, H. J., Griffin.
Delegate—Miles, W. C., Griffin.

Thomas County Medical Society

The Thomas County Medical Society announces the following officers for 1933:

President—Palmer, J. I., Thomasville.
Vice-President—Bell, Rudolph, Thomasville.
Secretary-Treasurer—Moore, H. M., Thomasville.
Censors—C. H. Ferguson, Thomasville; Agnew Andrews, Thomasville, and Frank Daniels, Pavo.

*Macon Medical Society**(Bibb County)*

The Macon Medical Society announces the following officers for 1933:

President—Harrold, Thos., Macon.
Vice-President—Bazemore, Wallace, Macon.
Secretary-Treasurer—Porch, Leon D., Macon.
Delegate—Weaver, O. H., Macon.
Delegate—Ridley, C. L., Macon.
Alternate Delegate—Hinton, Chas. C., Macon.
Alternate Delegate—Webb, Fred L., Macon.
Censors—J. D. Applewhite, C. C. Hinton and O. H. Weaver.

Tift County Medical Society

The Tift County Medical Society announces the following officers for 1933:

President—Dinsmore, V. F., Tifton.
Secretary-Treasurer—Fleming, Carlton A., Tifton.
Delegate—Pittman, Carl S., Tifton.

Dougherty County Medical Society

The Dougherty County Medical Society announces the following officers for 1933:

President—Irvin, I. W., Albany.
Vice-President—McKemie, H. M., Albany.
Sec'y.-Treas.—Lucas, I. M., Albany.
Delegate—Thomas, N. R., Albany.
Alt. Delegate—Cook, W. S., Albany.

Monroe County Medical Society

The Monroe County Medical Society announces the following officers for 1933:

President—Smith, W. J., Juliette.
Vice-President—Elrod, J. O., Forsyth.
Sec'y.-Treas.—Alexander, G. H., Forsyth.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*DEPARTMENT OF PUBLIC HEALTH
REVIEW—1932

The year 1932 has passed without any serious epidemic among the people of Georgia. It is true, the latter part of the year saw a mild epidemic of influenza, but at this writing it seems apparent that the general death rate is going to be at least six per cent lower than for the year 1931, while the birth rate will be at least two per cent higher.

The indications are that when the reports are all in and tabulated that the death rates for typhoid fever and malaria will see a decrease.

We wish to take this opportunity to thank the physicians of the state for their loyalty and assistance in carrying forward the public health program. We would, also, like to thank them for their splendid cooperation in reporting communicable diseases. We respectfully urge that this service to the state be maintained, so that we, as public health officials, may be in position to circumvent any epidemic that might be in the offing.

The following is a *resume* of some of the work carried on by this department during the past year. Figures used are on the basis of the period January through October, 1932:

Realizing that one of the most difficult problems facing the department at the present time is the task of continuing the operation of the county health departments, much time and effort have been spent in working out programs under reduced budgets and in securing finances for the operation of health units. Of the thirty counties operating under the Ellis Health Law, only one (Coffee) has discontinued health work. One of the districts organized with Federal drought relief funds were discontinued, when this fund was exhausted, June 30. Through the assistance of the United States Public Health Service, nurses have been added to the Brooks and Colquitt County units.

County health officers in Georgia made 11,499 communicable disease control visits; 64,888 maternal, infant, and child hygiene visits; examined 70,998 school children; immunized 148,040 school children; made 30,508 sanitary inspections; distributed 1,183,788 grains of quinine; installed 572 sanitary privies; and abated 2,305 nuisances.

A dental program was carried on in the schools during the fall and winter months in groups of four to six counties at a time. The

supervisor of mouth hygiene also assisted the dentists in each district to organize their program under a cooperative plan established with the State Dental Association for the association members to examine the teeth of the school children throughout the state. It is estimated that more than 250,000 school children have received free dental examinations under this plan.

A division of epidemiology has been in operation since February 1st, and some time and effort were spent in the internal organization of this division. As a result, it is now possible to study morbidity conditions in the state with much greater accuracy than before. Cases reported are indexed by counties and diseases. Morbidity reports are gathered from the reports of the laboratory, the division of vital statistics, health officers, and physicians throughout the state. It is now possible to study the more important communicable diseases in the various counties and in cities over 2,500 population with reference to color, sex, and age—something that has not been possible heretofore. A cross index of cases reported is kept to prevent duplications.

A study embracing complete epidemiological investigation of 216 cases of typhoid fever in Georgia over a period of eighteen months was conducted. One of the problems facing public health officials is the high death rate from typhoid fever. With the exception of the year 1929 when the rate was 11.7 per 100,000 population, the death rate from typhoid fever has remained constantly above 15 per 100,000 over a twelve year period since 1920, beyond which we have no accurate information. This study has taken into consideration several factors among certain elements of the population which add greatly to the problems of control and eradication. Primarily an agricultural state, farms everywhere are populated by tenants, both white and colored, whose plight at present in many instances approaches desperation. The depression which followed close upon the ravages of the boll weevil has left the Georgia white farmer in a precarious condition, while the status of the Negro is even worse. The typhoid death rate among Negroes is more than twice and in some instances nearly three times that of the whites. The fact that sanitation, particularly in urban communities, has been confined almost exclusively to areas occupied by white people partly explains this difference. It is believed that

the financial status of the people in rural areas has been the main factor in maintaining the high typhoid rate. In many instances illnesses in families go undiagnosed and untreated, as has been found from time to time during this study. At times, medicine for fever may be procured from the drug store in town and illnesses may exist for weeks without any physician in attendance. The number of deaths due to diseases unattended by physicians have increased from 3,497 in 1929 to 3,899 in 1931. A summary of the causes for the high typhoid rate takes into consideration the long summers and mild winters of Georgia, the decreased earning capacity of seventy per cent of Georgia's rural population, the poor sanitary ratings of households in eighty per cent of the cases studied, the question of carrier detection and control, and the importance of a well-balanced program for typhoid fever control and obliteration.

An active campaign for the early discovery of tuberculosis has been carried on during the year: 140 tuberculosis field clinics have been held; 5,883 examinations have been made, locating 540 positive cases of tuberculosis and finding 734 additional who were regarded as suspicious cases. The findings in these cases were reported to the physician designated by the patient examined. Clinics have been conducted in a number of counties not heretofore covered by this unit.

Work on the control and prevention of venereal diseases has been largely educational; 6,031 pamphlets have been distributed, and 58 lectures on social hygiene subjects have been given. Talks were made to the principal boy's preparatory schools and colleges throughout the state.

A large part of the work of the division of child hygiene has been done among the midwives of the state; 291 classes were organized, instructions given to 2,301 midwives. Of this number, 1,635 were given certificates and 847 were denied. In addition, 59 mothers' helpers leagues were organized with 2,818 girls enrolled; 26 mothers' classes with 265 members enrolled.

In the laboratories, 106,594 specimens were examined through October. This number has already surpassed that of the total for 1931. In addition, 26,637,000 units of diphtheria antitoxin, 53,298 units of toxin-antitoxin and toxoid, 631,946 units of typhoid vaccine, 25,650 smallpox vaccine points, 39,738 ampules of silver nitrate, and 1,824 pasteur treatments were distributed.

For a period of two and one-half years, or January 1, 1930 to July 1, 1932, an unprecedented rainfall deficiency created a severe strain upon the division of sanitary engineer-

ing to meet municipal drought emergency due to reduced water supplies. This involved problems such as searching for and developing emergency, new, or auxiliary supplies, proper distribution and sterilization in order to provide safe drinking water for municipal populations.

Establishing of local water plant laboratories and training of water plant personnel for chemical and bacteriological detail has been a major activity of the division of sanitary engineering. A Water Works Short School was held in Atlanta for training of water filter plant operators. To date, approximately 9,050 water analyses have been made at the central laboratory on water supplies.

During the current year the division of sanitary engineering has supervised draining of 570 ponds for the purpose of malaria control comprising approximately 3,452 acres of mosquito producing areas. This work was accomplished chiefly through the cooperation of county officials furnishing convicts for drainage, approximately fifteen counties and an equal number of towns or cities provided work for the unemployed on malaria drainage projects. Several counties are now receiving funds from the Reconstruction Finance Corporation and using such funds for providing malaria drainage and sanitation for unemployment relief.

Several towns and cities adopted during the year sanitary privy ordinances resulting in privy building campaigns, extension of sewers and other sanitary improvements. Sanitation of rural schools has been another activity of importance during the year.

NEW STRAIN TYPHOID VACCINE

The typhoid vaccine now ready for distribution by the Department of Public Health Laboratory has been prepared according to an improved method. The actual method of preparation is very much the same as before, but a new strain of the typhoid bacillus has been selected. This change is the result of experiments in England and America which tend to show that the old Rawlings strain of typhoid bacillus has during the many years of use, perhaps lost some of its potency.

The laboratory desires to request that only the new vaccine be used in the future. Physicians and health officers having old stocks of vaccine ordered prior to November 1, 1932, are requested to return it to the laboratory and order a fresh supply.

An excellent location for young practicing physician in South Georgia town. If interested, write the editor of the JOURNAL.

WOMAN'S AUXILIARY

OFFICERS

President—Mrs. S. T. R. Revell, Louisville.
 President-Elect—Mrs. J. Bonar White, Atlanta.
 First Vice-President—Mrs. N. Peterson, Tifton.
 Second Vice-President—Mrs. C. Thompson, Millen.
 Third Vice-President—Mrs. J. W. Simmons,
 Brunswick.

Recording Secretary—Mrs. J. E. Penland, Waycross.
 Corresponding Secretary—Mrs. F. B. Rawlings,
 Sandersville.
 Treasurer—Mrs. Chas. Usher, Savannah.
 Parliamentarian—Mrs. Charles Hinton, Macon.
 Editor—Mrs. C. W. Roberts, Atlanta.

GREETINGS FROM OUR PRESIDENT

Dear Co-Workers:

Even though the Christmas holidays will be a thing of the past by the time this message reaches you, you may know from the date of this letter that your president has been thinking of you all and sincerely hopes that all the blessings of the holy and glorious Christmas season may be yours.

It seems but wise as we begin the New Year to pause and consider just what has been accomplished in the first half of the Auxiliary year and although there have been many errors, failures, and unfortunate delays, there have also been many things to encourage us.

All committees were appointed before leaving our state meeting and consequently there was no delay in their beginning to function and they are doing splendid work.

Each member has had the opportunity of knowing the definite objectives of the Auxiliary for the year 1932-33.

Several new auxiliaries have been organized and much more general interest in all our activities has been manifested.

Eight of the twelve districts have held most successful meetings and in connection with them, there have been delightful social affairs. Let us not forget that the social side is one of our most important objectives.

We have been privileged to have a definite place in the Extension Course for physicians and other Regional Conferences have been held.

We have endeavored and generally succeeded in acknowledging all communications, making reports, and meeting obligations promptly to the State, Southern, and National Auxiliaries.

We have established the new filing system as per directions of the National Auxiliary.

We have made most delightful contacts with all the groups of the Parent-Teacher Association and Federated Clubs in the state, many of whom are gladly cooperating in carrying out the health educational program, which we hope and believe will accomplish much good. This enlarged program was

largely made possible through the generous and efficient assistance of the State Department of Public Health.

All phases of the Auxiliary work are being explained to all our members in the hope that information may increase their inspiration and enthusiasm.

Besides these things which we have to encourage us, your president has received letters expressing approval and praise of the Georgia Auxiliary from the president of the Medical Association of Georgia, from several members of the Advisory Council, from the Director and Assistant Director of State Department of Public Health, from five National Chairmen, and from the Presidents of the Southern and National Auxiliaries. These brought to your president, as she is sure it will to you, mingled emotions of humility and gratitude but at the same time, they can but inspire us to renewed efforts and a stronger determination to press forward to the realization of these plans.

I want to express my appreciation for the splendid cooperation that has made these results possible. I urge that you will bear in mind that regardless of how insignificant your part in this work may seem to you that your place is important and I ask that you do your best, always remembering that the chain can be no stronger than its weakest link.

I sincerely thank you for all that you have done to make this year a success and earnestly request that you may continue in the same faithful manner unto the end.

Most cordially,

MRS. S. T. R. REVELL,
President.

Louisville, Ga., Dec. 15, 1932.

The next annual convention of the Woman's Auxiliary will be held at Macon, May 9, 10, 11, 12.

Dr. W. Frank Wells, Atlanta, was re-elected Chairman of the Fulton County Board of Health; Dr. W. N. Adkins, Atlanta, re-elected Secretary.

NEWS ITEMS

Dr. and Mrs. H. E. Crow, Alto, entertained the members of the Habersham County Medical Society and Auxiliary at their home on December 1st.

The Bartow County Medical Society held its regular monthly meeting at the office of Dr. T. Lowry, Cartersville, on December 7th. Officers were elected for the ensuing year.

Dr. Logan Thomas, Dawson, has been re-elected Historian of the W. C. Davis Camp No. 15 of the United States Spanish War Veterans.

Dr. Geo. Bachmann, Emory University, was elected President of the Emory University Hospital Visiting Staff Association for the year 1933; Dr. J. J. Clark, Atlanta, Vice-President; Dr. J. D. Martin, Jr., Atlanta, re-elected Secretary-Treasurer.

The Hall County Medical Society met at the Recreation Hall, New Holland, on December 7th. Officers were elected for the ensuing year.

The American College of Physicians will hold its Seventeenth Annual Clinical Session at Montreal, February 6th to 10th, inclusive. The Windsor Hotel will be headquarters.

The American Association for the Study of Goiter, for the fourth time, offers \$300.00 as a first award for the best essay based upon original research work on any phase of goiter presented at its annual meeting to be held in Memphis, Tenn., May 15, 16, 17, 1933.

The Florida Medical Association will hold its Sixtieth Annual meeting at Hollywood, May 1, 2, 3. The Hollywood Beach Hotel will be headquarters.

The Nashville (Tennessee) Fellows of the American College of Surgeons tendered their fellow townsman and colleague, Dr. William D. Haggard, a testimonial dinner at the Hermitage Club, Nashville, November 14th., in honor of his election as President-Elect of the American College of Surgeons. Dr. M. M. Cullom was toastmaster. Dr. Perry Bromberg read congratulatory telegrams from many of the leading surgeons of the United States. Dr. Frank K. Bolland, Atlanta, was guest speaker and paid Dr. Haggard a glowing tribute. He commended the work of the college. Other speakers were Rev. George Stoves, Dr. Rufus E. Fort, and Dr. Chas. N. Cowden, all of Nashville. Dr. Haggard responded with much feeling. Two hundred seventy-five were present at the dinner, the great majority were members of the medical profession.

Dr. C. Thompson, Millen, entertained the members of the Jenkins County Medical Society on December 6th.

The Tri Society, which consists of physicians of Calhoun, Early and Miller counties, met at Blakely on December 14th. Officers were elected for the ensuing year. Its next quarterly meeting will be held at Edison in March.

The Randolph County Medical Society met at Cuthbert on January 5th. The program consisted of addresses by Dr. W. W. Crook, Cuthbert; Dr. A. L. Crittendon, Shellman; and case reports by other members.

The Macon Medical Society met at the Macon Hospital, Macon, on December 20th. Dr. Chas. H. Richardson, Dr. T. E. Rogers and Dr. J. D. Applewhite were appointed to investigate a proposal to establish a scale of fees for patients who are unable to pay regular fees for medical treatment and hospitalization and are not classified as charity patients.

The Terrell County Medical Society met at Dawson on December 30th. Officers were elected for the ensuing year. Dr. S. P. Kenyon and Dr. Lucius Lamar, both of Dawson, gave case reports.

Dr. S. H. Haddock, formerly of Millen and Augusta, moved to Anderson, S. C., and opened offices at 10 East Earle Street for private practice limited to pediatrics.

The Thomas County Cottage at the Georgia State Tuberculosis Sanatorium, Alto, was dedicated on January 2nd.

Dr. J. E. Sommerfield, office formerly in the Healey Building, announces the removal of his office to 360 Ponce de Leon Avenue, N.E., Atlanta.

An advertiser wrote to us that: "In the final analysis, all business is a profession of faith. It begins with the faith of an individual; it establishes faith among those with whom it has commercial relations. It builds up and reciprocates the faith of its employees. It looks ahead continually with faith and confidence in the future."

Dr. D. M. Bradley, Waycross, was elected County Commissioner of Health for Ware County.

Dr. and Mrs. J. P. Prescott, Lake Park, entertained the members of the Lowndes County Medical Society at their home on December 22nd. The society held a business meeting and elected officers for 1933.

Health News, published by the New York State Department of Health, advises the immediate use of fuming nitric acid for cauterizing wounds made by rabid animals or suspected rabid animals. The prompt use of the acid can not be over emphasized, according to the report. It further states that evidence has

accumulated to indicate that such wounds, promptly and thoroughly cauterized with fuming nitric acid, are seldom followed by rabies, while carbolic acid and other chemicals, frequently used as cauterants, are of little, if any, value. The Pasteur treatment should be given in addition to the use of any cauterant and as early as possible.

Dr. L. Minor Blackford announces the removal of his office to 104 Ponce de Leon Avenue, N.E., Atlanta.

The Clinical Society of the Piedmont Hospital met in the dining room of the hospital on January 9th. The following case reports were given: "Aleukemic Leukemia", by Dr. H. C. Sauls and Dr. Carter Smith, both of Atlanta; "Cerebellar Tumor with Spinal Cord Transplants", by Dr. E. F. Fincher, Jr., Atlanta.

The Ben Hill County Medical Society will sponsor tuberculosis clinics February 2nd and 3rd, which will be in charge of the Georgia Department of Public Health. It maintains complete equipment for examination and diagnosis of patients who have or may be suspected of having tuberculosis. Trained doctors and nurses will be in charge of the traveling clinic.

The Thomas County Medical Society met at Thomasville on January 6th. Dr. E. F. Wahl, Thomasville, read a paper entitled "Coronary Thrombosis"; discussed by Dr. Chas. H. Ferguson and Dr. C. K. Wall, both of Thomasville. Dr. H. B. Jenkins, Thomasville, gave a report on the dedication of the Thomas County unit at the State Tuberculosis Sanatorium, Alto. Dinner was served at the John D. Archbold Memorial Hospital. Officers were elected for 1933. Resolutions were passed to approve the legislative program of the Association and representatives from Thomas county in the legislature were asked to support such bills in the General Assembly of Georgia.

The Georgia Medical Society, Savannah, met on January 10th. Dr. A. J. Waring, Savannah, read a paper entitled "The Menace of the Common Cold"; discussed by Dr. G. H. Lang and Dr. E. N. Gleaton, both of Savannah. Dr. Wm. O. Bedingfield, Savannah, "Erysipelas with Septicemia and Localized Pyemia, and Successful Treatment with Serum—Case Report." Dr. William H. Myers, Savannah, "Dissecting Aneurism of Innominate Artery with Autopsy—Case Report".

When meditating, please send the essence of your thoughts in the form of a motto sentence to the Editor of the Journal for publication.

The staff meeting of the Crawford W. Long Memorial Hospital, Atlanta, was held on January 12th.

Officers were elected for 1933. The scientific program consisted of discussions on appendicitis and mortalities. Dinner was served in the dining room.

Dr. and Mrs. W. H. Hendricks, Tifton, entertained the members of the Tift County Medical Society in their home on December 30th.

The Ware County Medical Society met at the Y. M. C. A. building, Waycross, on January 4th.

The Macon Medical Society met on January 3rd. Dr. Jos. W. Larimore, Barnes Hospital, St. Louis, read a paper entitled: "The Differential Diagnosis of Diseases of the Right Colon—Illustrated with Lantern Slides".

Dr. Chas. H. Richardson, Macon, President-Elect of the Association, addressed members of the Woman's Auxiliary and Georgia Federation of Women's Clubs at Tennille on January 13th. Mrs. Geo. H. Lang, Savannah, sponsored the program.

The Federal Food and Drug Administration caused the seizures of one hundred consignments of drugs and foods during December. The seizures included 4,000 cases of partially decomposed shrimp; butter and cheese low in fat content; apples and celery which contained poisonous spray residues; partially decomposed rabbits; moldy and rancid nuts; substandard anesthetic ether; proprietary preparations, labeled with false and fraudulent curative claims; canned peas and catsup.

The Annual Congress on Medical Education, Licensure and Hospitals will be held at the Palmer House, Chicago, February 13th and 14th. The Congress is composed of the Council on Medical Education and Hospitals of the American Medical Association, the Association of American Medical Colleges, Federation of State Medical Boards of the U. S., and the American Hospital Association. It has been announced that matters of vital importance to American medicine will be considered.

The Fulton County Medical Society held its regular meeting at the Academy of Medicine, Atlanta, on January 19th. The following titles of a case report, clinical talk and papers were on the scientific program. "Skin Graft, Isograft—Case Report", by Dr. E. D. Highsmith, Atlanta; "Head Colds and Their Complications", Dr. Herschel Crawford and Dr. B. Russell Burke, both of Atlanta; "Common Duct Obstruction—Report of Ten Cases", Dr. Joseph C. Read and Dr. Lon Grove, both of Atlanta. Discussions were led by Dr. Floyd McRae, Dr. Jas. E. Pullin, and Dr. D. Henry Poer, all of Atlanta.

The members of the Woman's Auxiliary to the Hall County Medical Society showed two moving pictures at the local theater in Gainesville, on Janu-

ary 7th, entitled "Confessions of a Cold" and "Why Willie Was Willing to Wash". The program was in charge of Mrs. W. R. Garner and Mrs. J. H. Downey, both of Gainesville.

Dr. John A. Rhodes, Crawfordville, was elected County Physician for Taliaferro county for a term of two years.

Dr. Richard Binion, Milledgeville, has been re-elected County Physician for Baldwin county. He has served in this capacity since 1924.

Dr. Ben H. Clifton, Atlanta, was elected President of the Medical and Surgical Staff of the Georgia Baptist Hospital.

Dr. J. E. Lester, Marietta, County Commissioner of Health for Cobb county, states in his annual report that he made 352 visits to the schools during the past year and examined 2,522 children; made 21 public addresses; distributed 2,349 bulletins; gave three antityphoid injections to 6,747 people; gave three toxin-antitoxin treatments to 251; anti-smallpox vaccinations to 282. The above work was done in addition to numerous other duties as writing newspaper articles; communicable disease control; instructions in maternal, infant and child hygiene; office consultations and midwife instructions; group conferences and consultations with mothers; anti-rabies treatment; venereal disease control; examinations for intestinal parasites; inspection of food supplies, dairies and milk distributing places, ponds and marshes, private premises, schools and public buildings, camps and swimming pools.

Dr. C. W. Roberts, Atlanta, was guest speaker of the Atlanta Woman's Club on January 9th. Members of the Woman's Auxiliary to the Fulton County Medical Society were special guests.

Dr. J. R. Dykes, Cairo, was re-elected by the Grady County Board of Health on January 4th as Commissioner of Health for the ensuing year.

Dr. J. P. Palmer, formerly on the Staff of Steiner Cancer Clinic, Atlanta, has accepted a position on the Staff of the U. S. Veterans' Hospital at Hines, Ill.

Dr. J. E. Penland, Waycross, has been elected Commissioner of Health for Ware county.

The Medical Association of Georgia will hold its Eighty-Fourth Annual Session at Macon, May 9, 10, 11, 12.

The Southeastern Surgical Congress will hold its Fourth Annual Assembly at the Atlanta-Biltmore Hotel, Atlanta, March 6, 7, 8.

BIRTH

Dr. and Mrs. H. M. Tolleson, Hahira, announce the birth of a daughter, Mary Elizabeth, December 16, 1932.

OBITUARY

Dr. Robert E. L. Burford, Brunswick; member; University of Louisville School of Medicine, Louisville, Ky., 1889; aged 71; died at his home on December 1, 1932. He had served in the United States Public Health Service for many years until he retired two years ago. Doctor Burford was active for the advancement of his community in all constructive undertakings. In his duties as a public health official, he came in contact with many people, all of whom were impressed by his personality and remarkable ability. Doctor Burford's work is an outstanding demonstration of his service and worthy of emulation. He was a member of the Glynn County Medical Society and the American Medical Association, and the First Methodist church. Surviving him are: one daughter, Mrs. Wm. D. Taylor, Moconagua, Pa.; two sons, Dr. Robert S. Burford, Brunswick; and Edward Burford, a student at the University of Virginia. Funeral services were conducted from the residence by Rev. A. W. Rees and interment was in Palmetto cemetery.

Dr. James W. Patterson, Dawson; member; Vanderbilt University School of Medicine, Nashville, Tenn., 1884; aged 69; died at the home of his daughter, Mrs. Lawrence M. Norton, on December 7, 1932. He was born and reared in Stewart County and began the practice of medicine in Ralldoph County. For a time before moving to Dawson, he practiced at Lumpkin. Doctor Patterson was charitable and generous to the unfortunate and devoted a great deal of time to practice for people who were unable to pay for medical treatment. He was a member of the Terrell County Medical Society and the Methodist church. Surviving him are two daughters, Mrs. W. A. Howard, Washington; and Mrs. L. M. Norton, Dawson; three sons, Rev. J. W. Patterson, Odum; Homer S. Patterson, Columbia, S. C.; and Chas. E. Patterson, Washington. Funeral services were conducted from the home of his daughter, Mrs. Norton. Interment was in Cedar Hill cemetery.

Dr. Don Quixote Dallas, Pavo; Emory University School of Medicine, Emory University, 1898; aged 61; died at his home on December 2, 1932. He had been in the active practice of medicine for many years in his home community before he retired a few years ago. The people held him in high esteem and especially those he had treated. Doctor Dallas was a prominent citizen and an excellent physician.

Dr. Louis Warren Fargo, Augusta; University of Georgia Medical Department, Augusta, 1878; aged 80; died after an extended illness on December 14, 1932. He was born and reared in Augusta and spent his entire life there. Doctor Fargo practiced medicine and was on the faculty of the University of Georgia Medical Department for fifty-two years. He was retiring in his nature but was a student who possessed vast knowledge which accounted for his success as a teacher. Hundreds of successful physicians received instructions from him and recognized his ability. Doctor Fargo was an active church worker and a member of the

St. Paul's church. Surviving him are one brother, Joseph C. Fargo; two nieces, Mrs. J. S. Hook and Miss Lillian Clarke, all of Augusta. Rev. John A. Wright conducted the funeral services from St. Paul's Episcopal church. Interment was in Magnolia cemetery.

Dr. Russell A. Hardaway, East Point; Georgia College Eclectic Medicine and Surgery, Atlanta, 1909; aged 54; died at his home, 417 Thompson St., on December 22, 1932. He was a native of Luthersville and moved to East Point seven years ago. Doctor Hardaway was appointed city physician five years ago and held the position until the time of his death. He was a member of the Masonic lodge and the First Methodist church. Surviving him are his widow, two daughters, Miss Lydia Hardaway and Mrs. R. M. McDuffie, both of Atlanta. Funeral services were conducted from the First Methodist church. Burial was in the Luthersville cemetery.

Dr. Robert Lee Rogers, Fairmount; member; Atlanta College of Physicians and Surgeons, Atlanta, 1903; aged 62; died at his home on December 18, 1932. He had an extensive practice in Gordon county. His many friends held him in high esteem. Doctor Rogers was an amiable citizen and took an active interest in the welfare of his community and religious affairs. He was a member of the Fairmount Baptist church. Surviving him are his widow, two daughters, Mrs. W. T. Leeper, Belmont, N. C., and Miss Ruth Rogers, Fairmount; one son, O. P. Rogers, Fairmount. Funeral services were conducted from the Fairmount Baptist church by Rev. John H. Woods, Winder. Members of the Gordon County Medical Society formed an honorary escort. Interment was in Fain cemetery at Calhoun.

Dr. Charles R. Andrews, Atlanta; Atlanta College of Physicians and Surgeons, Atlanta, 1903; aged 53; died at his residence, 1241 Fairview Road, on December 24, 1932. He was a native of Atlanta and for many years until his retirement from practice on account of ill health was a widely known physician. Doctor Andrews was at one time associated in practice with Doctor Michael Hoke. He was a member of the First Baptist church. Surviving him are his widow and one son, Chas. R. Andrews, Jr., student at Emory University. Funeral services were conducted by Dr. Louie D. Newton from the Spring Hill Chapel, H. M. Patterson & Son. Burial was in West View cemetery.

Dr. Herring Winship, Macon; member; Jefferson Medical College of Philadelphia, Pa., 1903; aged 57; died at a private hospital after a long illness on December 30, 1932. He was one of the most prominently known physicians in middle Georgia and a member of a distinguished family. Doctor Winship devoted a great deal of time to the treatment of the poor, and was county commissioner of health for Bibb county for a number of years. He was a member of the

Macon Medical Society, American Medical Association, and the St. James Episcopal church. Surviving him are his widow, two daughters, Misses Mary and Elizabeth Winship; one son, Herring Winship, Jr., all of Macon. Funeral services were conducted from the residence, 203 Cherokee Ave., by Rev. Randolph R. Claiborne, Jr., Rector of St. James Episcopal church.

DOCTOR E. BATES BLOCK

1874-1932

Resolutions

In the passing of Dr. E. Bates Block we feel that the Fulton County Medical Society has suffered a distinct loss.

Always a quiet, reserved, modest gentleman, a scientist, intensely interested in all things medical and especially in those diseases connected with the nervous system. He prepared himself for his life work as few men did at that time.

Born in Atlanta, February 25, 1874, and reared among us, he distinctly belonged to Atlanta.

Dividing four years between Davidson University, North Carolina, and the University of Virginia, where he received his Bachelor of Arts degree, he then entered the medical department of the University of Virginia, from which he graduated with the degree of Doctor of Medicine in 1895. Instead of being satisfied, he immediately took up post-graduate work at Johns Hopkins University, and later became resident physician in the hospital.

He was fortunate in becoming assistant neurologist under his personal friend, Sir William Osler, while at Hopkins.

In order to broaden his medical foundation, he became instructor in Pathology and Bacteriology at the University of Minnesota. He then went abroad, becoming a volunteer assistant in pathology at the University of Prague.

After this he became instructor in neurology at the University of Strassburg, thus completing fourteen years of almost continuous study away from home. Then, being offered the professorship of Nervous and Mental Diseases (later known as Neurology and Psychiatry) in the Atlanta College of Physicians and Surgeons (now a department of Emory University), he returned to Atlanta in 1901 and had been continuously a member of that faculty up to the time of his death on October 25, 1932.

Dr. Block was married in 1908 to Julia Lowry Porter who, together with their two children, Bates, Jr., and Julia, survive him.

He was a frequent contributor to the medical magazines and was the author of the article on Peripheral Nerves in Blumer's *Bed-Side Diagnosis* and the article on Headache, Migraine and Epilepsy in Tice's *Practice of Medicine*. He had completed the manuscript of a book for Saunders on Nervous Diseases which, most unfortunately, was destroyed when the Doctors' Bldg. burned in 1930. Medically he spent a long and useful life, thoroughly enjoyed by him. He was a doctor whose interest in his patients was always paramount.

Strictly ethical, saying only kind things of his fellow practitioners. A doctor who always traveled above board, in open daylight, never using underhand methods of any kind.

He was a member of:

Fulton County Medical Society.

Medical Association of Georgia.

Southern Interurban Clinical Club (one of originators).

Southern Medical Association.

American Medical Association.

American Psycho-Pathological Association.

Fellow of American College of Physicians.

Association for Research on Nervous and Mental Diseases.

American Neurological Association.

In his passing the Fulton County Medical Society has lost a faithful and devoted member and the medical profession has lost a scholar.

Be it Resolved, That we spread upon our minutes this brief sketch of his life and extend to his wife and family our sincere and heartfelt sympathy.

And that a copy of these resolutions be sent to his family and be published in the Society Bulletin and the Journal of the Medical Association of Georgia.

CHAS. E. BOYNTON, M.D., *Chairman.*

W. W. YOUNG, M.D.,

RICHARD B. WILSON, M.D.,

Committee, Fulton County Medical Society.

DOCTOR GEORGE HENRY NOBLE

1860-1932

Resolution

Dr. George Henry Noble, son of James Noble and Jane Scott Noble, was born in Atlanta, February 25, 1860. His early life was spent in Rome and Atlanta, Georgia, and Anniston, Alabama. His early education was received in Atlanta educational institutions.

He graduated in medicine at the Atlanta Medical College in 1881. His medical education was further enhanced by special study and training in New York at the Woman's Hospital, Manhattan Eye and Ear Hospital, and the Bellevue Hospital, where he received the Janeway certificate. As a senior student he was demonstrator of chemistry in the Atlanta Medical College and for a number of years afterwards was assistant to the professor of Obstetrics and Diseases of Women and Children. In 1905, in association with some of his colleagues, founded the Atlanta School of Medicine, of which he became dean and professor of Abdominal Surgery and Clinical Gynecology, where he continued until 1913, when this school was merged with the Atlanta College of Physicians and Surgeons, which became the Medical Department of Emory University in 1915.

He continued as professor of Clinical Gynecology until he became emeritus professor in 1917, which position he occupied until the time of his death. In his early medical career he was director and chief surgeon of the King's Daughters Hospital and for twenty-six

years was visiting gynecologist to Grady Memorial Hospital, where he rendered valuable service through his professional skill and by his wise counsel in the direction of its affairs. He founded Dr. Noble's Private Infirmary, where he did the major part of his professional work for about thirty-five years, but notwithstanding his personal interest in this institution, he found time to serve as a member of the staffs of other Atlanta hospitals, giving freely of his wise counsel in their administration.

He contributed to "Original Contributions by American Authors". Some of Dr. Noble's outstanding work is included in J. Wesley Bovee's book entitled "The Practice of Gynecology". He contributed the following chapters to Dr. Bovee's text: Fecal Fistula, connecting with Female Generative Organs; Urinary Fistula, connecting with Female Generative Organs and the Rectum; Lacerations of the Perineum, and Diseases and Injuries of the Vulva and Vagina. In addition, his article on intra-abdominal pressure was widely quoted.

Dr. Noble was president of the Atlanta Medical Society, now the Fulton County Medical Society; president of the Medical Association of Georgia; president of the Atlanta Obstetrical Society; president of the Medical Board of Grady Hospital; vice-president of the American Gynecological Society; Secretary of the Gynecological Section of the International Congress of Arts and Sciences at the St. Louis Exposition; one of the founders, a fellow and governor of the American College of Surgeons.

During the World War he was a member of the Medical Section of the National Council, American Red Cross, and the Medical Preparedness Committee of Georgia.

He was a member of St. Philip's Cathedral for more than thirty years and for many years was senior warden of this church.

Dr. Noble was married to the late Miss Mary Lucy Taliaferro, daughter of the late Valentine H. and Mary Jones Taliaferro, of Atlanta.

He is survived by three children: Dr. George Henry Noble, Jr., Mrs. B. H. Wagnon, and Mrs. Victor A. Moore, Jr.

Interested always in education, both academic and medical, his interest in patients, whether private or charity, exemplified the life of a true physician

Therefore, Be It Resolved:

1st. That the Fulton County Medical Society has lost one of its most beloved and distinguished members.

2nd. That the state, South and nation have likewise suffered an irreparable loss.

3rd. That a copy of these resolutions be placed in the Bulletin of the Fulton County Medical Society, Journal of the Medical Association of Georgia and a copy be sent to the family.

W. L. GILBERT, M.D., *Chairman,*

CHAS. E. WAITS, M.D.,

ALLEN H. BUNCE, M.D.,

Committee, Fulton County Medical Society.

DOCTOR ALLEN FORT CALDWELL

Resolutions

On November 10, 1932, the Fulton County Medical Society was saddened by the death of a beloved member, Dr. Allen Fort Caldwell. He was quiet and retiring, but alert to every opportunity to be of service to others, distinctly unselfish, and a genuine friend and fellow.

Allen Fort Caldwell was born in Sumter County, Georgia, November 17, 1891. During the early years of his life his family changed their residence to Waycross, Ga., where he received his elementary and high school training. He received his pre-medical education at the University of Georgia and later attended Emory University Medical School, graduating in the class of 1915.

Dr. Caldwell has been a very active and enthusiastic member of Fulton County Medical Society and the Medical Association of Georgia since March 16, 1916. He was also a member of The Southeastern Surgical Congress. His entire professional career was spent in the practice of urology, although he was interested in every phase of medical activity. He was largely responsible for the organization of the Georgia Urological Association, and the Atlanta Urological Society. He worked untiringly for these bodies and served both as secretary and treasurer since their organization. No physician in Georgia worked more diligently for the advancement of urology in the state than did Allen Caldwell.

He was not only a physician, but also a valuable citizen, giving much of his time and means to assist worthy students in completing their education. He contributed freely and without acclaim to numerous charities, and in every way manifested a physician's real love for his fellowman.

He was also active in the Masonic fraternity, being a Past High Priest of Mount Zion Chapter Royal Arch Masons, and at the time of his death held an office in Coeur de Lion Commandery Knights Templar.

Dr. Caldwell was married in 1922 to Miss Louise Heckle who, together with two children, Marjorie and Allen, Jr., and his mother, Mrs. J. A. Adamson, survive him.

Whereas, the Fulton County Medical Society and the profession at large have lost a beloved member and devoted friend, and

Whereas, in the passing of an esteemed citizen the community has suffered an irreparable loss,

Therefore, Be It Resolved: That these resolutions be spread upon our minutes, published in the Bulletin of the Fulton County Medical Society and the Journal of the Medical Association of Georgia, and that a copy be sent to the family.

Respectfully submitted,

ALBERT F. BRAWNER, M.D., *Chairman,*

W. L. CHAMPION, M.D.,

MAJOR F. FOWLER, M.D.,

Committee, Fulton County Medical Society.

COMMUNICATIONS

STATE TUBERCULOSIS SANITARIUM

To the Editor:

I am herewith enclosing copy of a letter just received from Dr. William D. Cutter, Secretary, Council on Medical Education and Hospitals of the American Medical Association, regarding the inspection of our institution by Dr. F. H. Arested on the Staff of the Council.

M. F. HAYGOOD, M.D., *Superintendent.*

Alto, Georgia.

December 11, 1932.

Dr. Marvin F. Haygood,

Supt., State Tuberculosis Sanatorium,

Alto, Georgia.

Dear Dr. Haygood:

Our representative, Dr. F. H. Arested, who visited your sanatorium recently, has now returned to this office and made to us a report of his visit. We wish to thank you for the cordial manner in which you received Doctor Arested and for the opportunity you afforded us to become better acquainted with the service which your sanatorium renders to the people of your community.

It is especially encouraging to note that your patients have an opportunity to benefit from the various medical and surgical procedures which have been proven of definite value in the treatment of tuberculosis.

We are glad to note the interest which you are taking in increasing the educational service in your sanatorium through the establishment of an autopsy service. We are confident that this effort will be of distinct advantage to the members of your staff and will also become of indirect value to your future patients.

May we also mention that the added hospital facilities made possible through the efforts of Thomas County is a worthy provision and will undoubtedly be productive of better and more lasting results for the patients from this county who are thus able to secure a longer period of hospitalization.

We feel assured that your sanatorium will continue to maintain high standards of medical service.

WILLIAM D. CUTTER,

Council on Medical Education and Hospitals, A. M. A.
Chicago, Ill.

December 8, 1932.

PUBLIC HEALTH AND PRIVATE PRACTICE

To the Editor:

I have just received the December issue of the Journal of the Medical Association of Georgia and read with a great deal of interest your editorial on "Public Health and Private Practice". I am particularly struck with the last paragraph in which you say:

"For many years the relationship existing between public health workers and private practitioners in

Georgia has been most cordial. This relationship must be maintained."

It has always been the desire of this department to keep that relationship cordial, and I want to pledge to you and the medical profession of Georgia that we shall always strive for that purpose.

T. F. ABERCROMBIE, M.D.,

Director, Department of Public Health.

Atlanta, Ga.

January 4, 1933.

BIRTH AND DEATH REGISTRATION

Dear Doctor:

The Bureau of Census in Washington, and the Georgia Department of Public Health make annual tabulations and compilations of vital statistics. These statistics are based upon the data contained in birth and death certificates registered with the local registrars. Therefore, if birth and death registration is incomplete these statistics will be inaccurate.

In 1931 Georgia was the only state in the Union that had an increase in its birth rate over 1930. This distinctive record is due in large part to the co-operation of the physicians in filing certificates for births they attend.

According to the records for the first ten months of this year (1932) it looks as though Georgia will again attain this distinction. But to make sure of it will you kindly search your records and if you find that you have neglected to file a certificate for any birth you attended, file one at your very earliest convenience.

I take this opportunity to thank you for your co-operation in the past and trust that in the New Year you will continue to give your whole-hearted support to registration matters.

T. F. ABERCROMBIE, M.D.,

Special Agent.

McKESSEON'S VITAMIN CONCENTRATE OF COD LIVER OIL

With the advent of the therapeutic importance of Vitamins, there has been instituted a tremendous amount of research work, both for the purpose of determining the true value of Vitamin and also, for the purpose of developing substitutes for the natural vitamins as they occur in cod liver oil.

Natural Vitamins

It has long been our contention that, based upon the history of two hundred years of cod liver oil therapy, there existed no logical reason why we should turn aside from this well tried and established remedy and delve into the complexities of chemically produced substitutes, or reinforcing beyond the body's ability to absorb cod liver oil.

Administration of Vitamins

In standardizing McKesson's Vitamin products, we have arrived by careful study at a given dosage level which we have demonstrated produces the best results, and we, therefore, hold that to administer vitamins in excess of the dosage level established does not pro-

duce beneficial effects in proportion to the quantity administered, but is only efficient in proportion to the amount absorbed.

McKesson's Vitamin Concentrate of Cod Liver Oil

McKesson's Vitamin Concentrate of Cod Liver Oil is supplied in the strength of 11A and 11D, suspended in a neutral oil to preserve the vitamins against oxidation. It is flavored slightly to render it more palatable, and in its administration minims from a specially designed dropper are substituted for teaspoonfuls.

Vitamin Potency (Danger of Confusion)

The present United States Pharmacopeia X states that cod liver oil, to meet the requirements of this edition, must contain not less than 50 units of Vitamin A per gram. Were we to base our claims for potency on the U. S. P. X. we could state that our concentrate is 110 A, as each gram contains not less than 5,500 units of Vitamin A.

With the issuing of the new United States Pharmacopeia XI, the standard will be raised considerably higher than 50 units. Most pediatricians have long since considered that pediatric oil should have a Vitamin A potency of not less than 500 units per gram. Inasmuch as we make our concentrates from pediatric oil our designation of 11 A and 11 D means that our concentrates are 11 times stronger than high potency oil, or 5,500 units of Vitamin A per gram.

GOAT MILK—ITS CONTENTS

Westwyndes Goat Dairy is fifteen miles north of Atlanta, on the Chamblee-Dunwoody Road. It occupies a 165 acre farm, where most of the feed for the goats is produced. Here they have an abundance of spring water and large pastures for browsing and exercise, which insures healthy, hardy goats.

The herd of milk goats is one of the finest in the South and every goat in the herd has been tested both for tuberculosis, a disease goats rarely ever have, and abortive fever.

The milk is handled with the utmost care and every precaution is taken to produce clean, wholesome milk low in bacteria.

Goats' milk contains:

Goats' milk contains lactic acid to the extent of .12 to 1.65 per cent, it also contains all the blood salts:

Potassium chloride, calcium phosphate, and sodium chloride.

The reaction of goats' milk in the stomach is alkaline and on account of the small fat globules of which it is composed it is very easily digested.

The goat is the cleanest animal there is, particularly the milk does. There is no animal so clean and dainty in its habits as these does from which you get your milk. The male goat may have an odor, but the male goats are kept in separate quarters from the milk goats or does.

	PER CENT
Water	87 to 89.39
Protein	2.78

Fat	3.84
Sugar	4.25
Ash81
Potassium Oxide	44.58
Sodium Oxide	7.18
Calcium Oxide	5.99
Magnesium Oxide	2.48
Iron	2.00
Phosphorus	13.78
Sulphur	2.42
Chlorin	31.00
Flourin66

They operate a grade "A" dairy under a permit from the City of Atlanta, which is a guarantee that they have complied with their many rigid requirements.

Westwyndes Dairy is under the direct supervision of Mr. and Mrs. H. G. Tye and the public is invited to visit the dairy any time.

They deliver goats' milk to Atlanta every morning.

GLENWOOD PARK SANITARIUM

Glenwood Park Sanitarium, Greensboro, N. C., was established about thirty years ago as an institution for the treatment of mild mental, nervous and habit (morphine and whiskey) cases. The institution is owned and operated by Dr. W. C. Ashworth, who has limited his practice to the treatment of nervous and habit cases since the foundation of the institution. Glenwood Park Sanitarium is complete in all of its appointments, and every convenience is afforded which will tend to promote the comfort and cure of the patients.

No inflexible, standardized method of treatment is employed, but on the other hand, each case is regarded as a problem unto itself. Glenwood Park Sanitarium is especially noted for the home-like atmosphere which dominates the place, and the individuality of the treatment. No harsh restraints are imposed upon the patients, but only the observance of such rules and regulations as are necessary for the proper discipline of the institution, and the well-being of the patients. Rates are as reasonable as can

be made consistent with first-class accommodations and individual treatment.

Descriptive literature of the institution, and reprints of articles written by Dr. W. C. Ashworth, Medical Director and Owner, will be gladly mailed upon request. 1305 Glenwood Avenue, Greensboro, N. C.

VITAMIN CONCENTRATE OF COD LIVER OIL

In this issue appears a full page advertisement on McKesson's Vitamin Concentrate of Cod Liver Oil. In prescribing this product you can be sure that your patient receives the full therapeutic value of Vitamins A and D, since one single gram furnishes 5500 units of Vitamin A and 146 units of Vitamin D. A feature of unusual interest is the specially designed glass dropper which eliminates all guesswork in measuring dosage. The coupon provided in the advertisement makes it very convenient to secure a full sized package for trial. This is an opportunity which we believe all physicians will want to take advantage of.

The American Medical Association will hold its Eighty-Fourth annual session at Milwaukee, June 12, 13, 14, 15, 16.

Herbert Rattner, with comments by William Allen Pusey, Chicago (Journal A. M. A., Dec. 3, 1932), presents in detail the case of a young man in whom, two weeks after he married, an acute dermatitis on the face, neck and upper half of the body developed. He had a psychoneurosis, an anxiety state, and it was assumed that the dermatitis was a neurogenous dermatitis. It was subsequently shown that the acute dermatitis was excited by perfumed cosmetics which his wife used. Exception is taken to the use of the term neurodermatitis for a so-called dermatitis of neurogenic origin, as it is confused with the entity neurodermite (Brocq).

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Our complete manufacturing plant enables us to fill your oculist's prescriptions promptly.

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Strictly Private. Absolutely ethical. Patients accepted at any time during gestation. Open to Regular Practition-



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Adoption of babies when arranged for. Rates reasonable. Located on the Interurban and Penna. R. R. Twenty miles southwest of Philadelphia. Write for booklet.

THE VEIL
West Chester, Pa.

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA

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Number 2

AN EFFICIENT METHOD OF TRAC- TION FOR FRACTURES OF THE FEMUR*

CHARLES H. WATT, M.D.
Thomasville

It is not within the scope of this paper to enter into a discussion of the different methods of treating fractures of the femur, but to describe briefly a method we are now using at the John D. Archbold Memorial Hospital. The method commends itself to us because it has proven efficient and economical.

In our section of the country we have recently been forced to consider the economical side more than before and this was partly responsible for the adoption of this method. The usual methods of traction require hospitalization for eight to ten weeks. By this method we have reduced this time to nine and one-half days.

Countertraction has always offered some difficulty in fractures of the femur. Hoke and others obtain it by means of a plaster-of-paris spica which includes the sound leg so that the pressure is exerted against the bottom of the foot on the sound side. Andrews of Seattle has recently published a description of an ingenious device for treating these cases that utilizes also the uninjured leg for countertraction.

In the method herein described countertraction is obtained by the use of a "running-trunk" plaster-of-paris spica cast fastened to the head of the bed by means of ropes attached to metal strips incorporated in the cast.

Description of Method

As soon as the patient is admitted to the hospital a radiograph is made of the injured leg in order to determine the exact type and site of the fracture. Following this, the patient is put on the orthopedic table and an

anesthetic administered if necessary. If skin traction is to be used, two long strips of adhesive plaster, each three inches wide, are prepared. These are torn into three equal strips for about two-thirds of the length of the three-inch strip. These strips are then applied one on each side of the leg from the mid-thigh and extending well beyond the foot. The middle one-inch strip passes up the side of the leg while the outside strips pass around the leg, one anteriorly and the other posteriorly on each side. Pads are placed over the malleoli and the strips are not allowed to cross over the Achilles tendon, but higher up over the soft tissues of the calf. If one prefers to use skeletal traction, a Steinman or Kirshner pin may be inserted through the lower end of the femur or upper end of the tibia, depending upon the operator's preference. In the majority of our cases we have used skin traction, but in some we have used the skeletal form. Both have proven efficient, but the introduction of a pin by the Kirschner method is the more simple and I am inclined to the use of this in the future.

The second step consists in applying a plaster-of-paris boot, over stockinette and a well-padded foot, from the knee to the toes. If skin traction is used the adhesive strips pass through this cast at the level of the malleoli. If skeletal traction is used the plaster may be carried around the pin, leaving the two ends protruding.

The third procedure consists in applying a running trunk spica plaster-of-paris cast that extends up to the rib margins, or below, four to six inches down the thigh on the injured leg and to the knee on the sound leg, but not beyond. The plaster on the thighs is braced by means of a wooden or metal strip held in place by plaster-of-paris. Incorporated in the upper part of this body cast, about the anterior axillary line on each

*Read before the Medical Association of Georgia, Savannah, Ga., May 19, 1932.

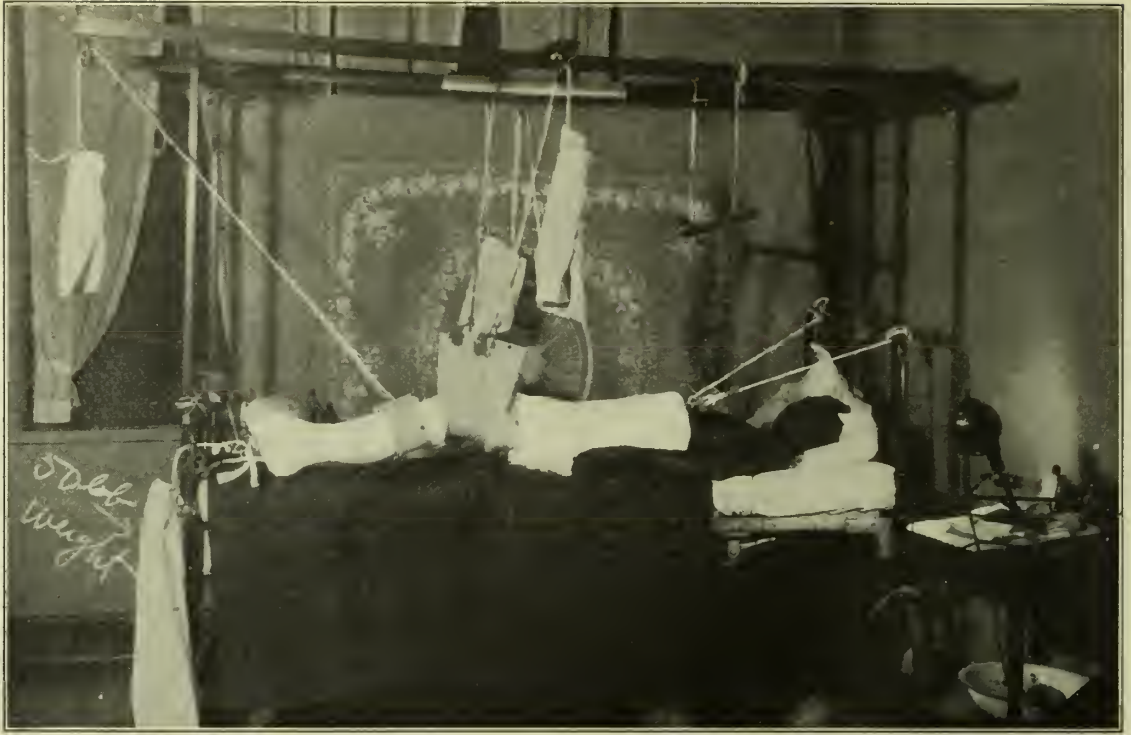


FIG. 1
Skin traction, plaster-of-paris "running trunk" used for countertraction.

side, are two strips of plumber's hanger iron twelve to fourteen inches long. Attached to one end of each strip is a metal ring which protrudes from the cast. In applying the cast it is essential to pad the leg portion well with felt posteriorly because the pressure is exerted mainly against the tuberosities of the ischium. If these are well padded the patients do not complain.

When these casts are completed the patient is transferred to a fracture bed with a Balkan frame overhead. Traction is obtained by means of pulleys and weights. Countertraction is obtained by ropes or straps fixed to the rings in the body cast and fastened to the head of the bed. A suspension hammock is usually applied to support the lower portion of the thigh (Fig. 1). If skeletal traction is used, this sling or hammock may not be necessary (Fig. 2). We have applied as much as fifty pounds with skin traction without slipping of the adhesive, the plaster boot holding the adhesive firmly against the leg. This boot serves an additional purpose for by means of a sling of muslin the foot can be held in the proper position of rotation by simply pushing a thumb tack through it into the plaster.

Twenty-four hours after traction is applied the position of the fragments is checked by x-ray. Usually the shortening has been overcome in this time, though some adjusting may be necessary. As soon as a satisfactory reduction has been obtained, as shown by x-ray, the gap between the two portions of the cast is filled in with plaster-of-paris. This is allowed to harden for twenty-four to forty-eight hours, at the end of which time the traction is removed, the finishing touches put on the cast and the patient is ready to be dismissed from the hospital until such time as is deemed advisable for removal of the cast.

While the number of cases we have treated by this method is entirely too small to be of any statistical value, it is sufficiently large to convince us that if the fracture can be reduced by traction this method offers an excellent chance of success. Naturally we strive for the ideal in each case; that is, we strive to obtain a perfect reduction of the fragments, but this is not often possible. Correction of over-riding, good alinement and 50 per cent or more of the fracture surfaces in contact will usually give good union.



FIG. 2
Skeletal traction, plaster-of-paris "running trunk" used for countertraction.

Analysis of Cases

During the past six months we have used this procedure in ten cases. One of these suffered fractures of both femora, making a total of eleven fractures. These patients were all colored except one, a white boy of fourteen. (Fig. 3, a-b). The youngest was this boy of fourteen and the oldest seventy-two. Eight were males and two females. Longest stay in the hospital was fourteen days and shortest five days with an average of nine and one-half days.

Eight of these cases are now old enough to form some opinion about the end result. Casts were left on eight to twelve weeks, depending upon the age of the patient and the degree of success of the reduction. One case at the end of eight weeks was apparently firm but two weeks later showed bowing and some motion although no weight bearing had been allowed. The bowing was corrected and a cast applied for four weeks more, solid union resulting. One case required open reduction because of intervening soft tissue between the fragments. Another case showed a measured shortening of 1.5 cm.; all others showed no shortening, firm union and excellent functional results. As in all cases treated with plaster-of-paris, time was required to obtain satisfactory flexion of the knee.

In addition to the series cited above, one case of non-union with marked over-riding was corrected by this method and operated upon. This patient had been injured five months previously but after breaking up the union under anesthesia we were able, by this method, to overcome the shortening within forty-eight hours. (Fig. 4, a-b).

Advantages of Method

These are mainly economical. An average stay of nine and one-half hospital days as against eight weeks or more is something to be considered, especially at the present time. Once reduction has been accomplished and the cast completed there is little risk of the fragments slipping due to the patient sliding down in the cast because of the pressure against the tuberosities of the ischium. There is no pressure on the perineum. The traction apparatus requires very little attention once it is set up and as soon as reduction is attained this apparatus may be removed for use elsewhere. This too is a saving.

Objections to Method

(a) Pressure on the perineum or against the tuberosities of the ischium. With felt padding turned back over the edge of the cast this objection is avoided and the patients do not complain. The leg is in abduction which prevents pressure on the perineum.

(b) Pressure sores on the heel. This oc-



FIG. 3-A
Anterior-posterior and lateral radiograms before traction was applied.

curred in only one case. The traction is from the skin and does not pull the plaster-of-paris boot down against the heel, causing pressure or constriction. If skeletal traction



FIG. 3-B
Forty-eight hours after applying traction. This case was in hospital five days. End result perfect.

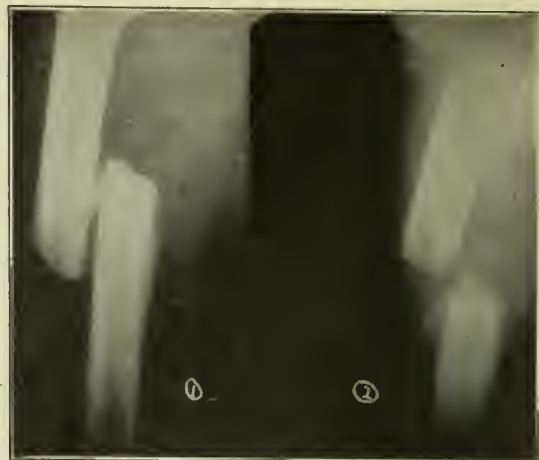


FIG. 4-A
1. Before traction was applied.
2. Forty-eight hours after application of spica running-trunk countertraction and skeletal traction with Kirschner pin. Demonstrates effectiveness of this form of traction.

is used, one need not put the boot on at first, but by doing so it facilitates completing the cast once reduction is obtained.

Conclusion

By the use of plaster-of-paris spica casts as countertraction for cases of fracture of the femur, we have greatly reduced the number of hospital days and feel that we obtain better anatomical and functional results than formerly.



FIG. 4-B
Open reduction and intramedullary graft. Age of the fracture with callus over bone ends made operation advisable.

NOTE: I wish to express my appreciation of the assistance rendered in this work by Dr. J. J. Collins, Roentgenologist, and Dr. Harold D. Green, House Surgeon of the John D. Archbold Memorial Hospital.

DISCUSSION ON PAPER OF DR. WATT

Dr. C. F. Holton, Savannah: Dr. Watt is to be commended very much for his attempt to reduce the

hospitalization time for these patients. We in industrial surgery know that hospitalization usually eats up all the money that is coming to him before the patient is out.

I think by all means traction is the best method of treating fractures of the femur. In this method, Dr. Watt combines traction with plaster and gets his patient out in ten days, which is fine. I still use the permanent traction because I think it is more comfortable, and I can move these patients and treat them at home after about three weeks.

Plaster over the adhesive is to me the only sensible way to get traction from the skin, for it is almost impossible to put sufficient weight on a man's leg to get enough traction and not have the adhesive pull off and irritate the skin. I like the Kirschner method.

I wish to compliment Dr. Watt on his method for it certainly is ingenious and I will give it a trial in the future.

Dr. W. S. Goldsmith, Atlanta: It is gratifying to me to find that we have surgeons who still use plaster-of-paris in treating fractures of the femur. I was brought up in the plaster-of-paris era, and learned my method under the man whom I think was the master of them all, our beloved Willis Westmoreland. To those of us who do industrial surgery and those not practicing in large centers, this type of paper is of the greatest possible interest. I do not know of any emergency that can arise with the constantly increasing automobile accidents, short of brain injuries, that will require greater patience and ingenuity than the treatment of fracture of the femur. If the result is not good the man is lame, has a short leg, and is a walking advertisement of the surgeon.

Dr. Watt did not bring out something that I am sure he will mention in closing, for it is one of the most aggravating conditions we find in traction, and that is the trouble we have with the knee. I think his principle of removal of the traction within twenty-four to forty-eight hours solves that question. Personally, I cut these cases down within two weeks, manipulate the knee joint, and reapply the cast and so on. If this is not done there will be a persistent stiffness of the knee that will give the patient trouble.

It is remarkable that Dr. Watt can get these patients out so quickly, for when I have such a case I prepare the family to meet the expenses of two to three months' hospitalization, which is hard to order in these days. I wish Dr. Watt would tell me how often he has his patients return for new splints or dressings. When patients with fractured femurs come into the hospital from a distance we are confronted with a hard problem.

Dr. C. H. Watt, Thomasville, (closing): Dr. Holton mentioned the use of an anesthetic. I have seldom been able to anesthetize a man with large thigh muscles and successfully reduce a fracture of the femur immediately. If one does succeed in doing this while on the orthopedic table with the perineal

post in place he may find a few days afterward that the fragments have again slipped over each other. This is due to the fact that after removal of the post the patient slides down in the cast. By the method I have described this cannot happen because the cast is already pushed up as far as possible against the ischium.

The stiff knee mentioned by Dr. Goldsmith is always a difficult problem. In some cases I have used an artificial metal knee which I have incorporated in the cast. At the end of four or five weeks the cast is cut in a circular manner at the knee and motion begun. These cases have had right angle motion at the knee when the cast was removed. We have not obtained the ideal in treating these cases, but there is good union and a useful leg.

COSMETIC DERMATOLOGY*

JACK W. JONES, M.D.

HERBERT S. ALDEN, M.D.

Atlanta

All deviations from the normal skin which do not seriously injure the health of the individual, but, never-the-less, are disagreeable to the patient, may be spoken of as "cosmetic skin complaints". Such skin lesions as benign nevi (moles and angiomas), superfluous hair, pigmentations, scars, freckles, tattoo marks, acne, warts, leukoderma and telangiectases all come under this heading. Many of these complaints may be considered trivial by some, but they often are matters of much concern and embarrassment to a sensitive introvert, who, because of such may be unable to adjust himself to normal social intercourse. A certain disinterest on the part of the medical profession and a tendency to send patients with cosmetic defects to the beauty parlor, has forced many individuals into the hands of charlatans who often cause major injury in an endeavor to remove a minor blemish. It is no wonder that beauty cultists and systems have sprung up over the country in ever increasing numbers, and it is unfortunate that there is no legislation to curb their too optimistic and often grossly misleading statements. They have found as did the food and drug fadists, fakers, and "medicine men" before the National Food and Drug Act was passed, that the public is easily fooled, and that secrecy and mystery

*Read before the Medical Association of Georgia, Savannah, Ga., May 18, 1932.

are their greatest stock in trade. It is the purpose of this paper to call attention to some of the injurious effects of these cosmetic methods and preparations as well as to point out the correct manner of handling the patient with a cosmetic defect.

Much of the reading matter in the average magazine for women is crowded out by the misleading and extravagantly advertised claims of numerous purveyors of apparently endless cosmetic preparations. Most of the manufacturers of these cosmetics are reputable firms and their marketed preparations are free from harmful ingredients, but as in all large businesses there are a few black sheep in the trade. While a few of the cleansing, bleaching and cold creams may contain a harmful mercury salt, there are mainly three types of cosmetics that may be and usually are harmful: (1) hair dyes, (2) freckle removers and acne lotions, and (3) hair removers.

Of the large number of people who dye the hair either from a real or supposititious cause there are comparatively few who come by any harm from it, but it is well to recognize the fact that hair dyes in general are not as harmless as their manufacturers usually state. The hair dyes for the most part either contain an aniline derivative base (paraphenylene-diamine) which is a highly irritating chemical to many individuals, or they contain a lead, silver or copper salt, the latter usually in combination with pyrogallol. The prolonged use of the metallic base dyes has been known to lead to silver or lead poisoning. The aniline base dyes may produce inflammation and edema around the face, eyelids, neck and shoulders of a very severe character, that often only clears up after the dyed hair has completely grown out. One must not be misled by the history that the victim has been dyeing the hair for years without any untoward results since the composition of the dye may vary greatly, as well as the individual susceptibility. The role that the dye plays in many of these cases may be satisfactorily proven by a simple patch test on an unaffected area of skin.

The freckle removers, skin bleaches and some of the cleansing creams contain as the active ingredient some form of mercury salt,

the quantity in direct proportion to rapidity with which results are supposed to be obtained. Many of these preparations if used as zealously as the manufacturers state, will and often do produce erythematous vesicular eruptions on the face which are no small matter to the budding debutante or the frantic widow of forty years.

The demands of the up-to-date woman for a hairless body have caused some manufacturers, and even physicians to utilize all types of depilatories to assuage this demand, some of them of doubtful value. It is in this branch of cosmetology that most of the permanent damage is done. The average depilatory that may be applied by the patient contains more or less barium sulphide and sodium sulphite in an ointment base. One manufacturer labels such a preparation as "an objectionable hair remover". It is; but of course the manufacturer meant that it was "a remover of objectionable hair." It is difficult to hide the disagreeable sulphide odor with any perfume and since the action of these depilatories depends on the destruction of hair at the skin surface, the preparations often destroy the skin too, so these preparations have dwindled somewhat in popularity. A few depilatories are made with a wax base which is applied warm and allowed to cool. By jerking the preparation off the hairs are yanked out. Besides being a decidedly uncomfortable procedure the hairs soon return and the process has to be resorted to again and again.

Following the more general use by physicians of thallium acetate as a depilating agent for fungus infections of the scalp in children, a depilatory for adults containing a considerable amount of thallium acetate sold under the name "Koremlu Cream" has been introduced on the American market. Only an astounding ignorance or malevolence on the part of the manufacturer could have allowed such an action. Nevertheless, the preparation is advertised and sells at a high price to a gullible public. At the present writing there have been twenty-six reports of thallium acetate poisoning following the use of "Koremlu Cream". Most of the poisoning has occurred in the form of severe anemia, multiple neuritis and complete alopecia. The symp-

toms developed only after several months of application of the cream. Thallium acetate is a dangerous poison especially for adults and has on occasions produced death. Locally applied it certainly will produce depilation but the risk of pulmonary absorption is great, hence the number of cases of poisoning that have developed. The manufacturers of "Koremlu Cream" report that they have reduced the quantity of thallium acetate in the preparation but in any quantity it is dangerous and it is needless to say that such a drug should be removed from the market. At present there is no legal means other than repeated suit which will accomplish this and the preparation continues to be sold.

There are several mechanical means by which superfluous hair can be removed. One in the form of wax pastes has been discussed. Because the roentgen or x-ray will in sufficient doses produce a transient hair loss without permanent damage, some argue that the permanent removal of hair can be accomplished by the same means with a larger dose. Unfortunately *this is not true*. Dr. Albert C. Geyser claims to have so modified the x-rays that with his apparatus it is possible to produce depilation of hair without damage to the skin. He calls his device the "Trichosystem". These machines have been leased to beauty parlors all over the country, and they are doing an irreparable amount of damage to numbers of gullible public who fall into the hands of the "Tricho-system" operators. All authorities dealing with the roentgen ray unanimously agree that it is not possible to permanently remove hair with the x-ray without producing some permanent damage to the skin. Often this damage does not become apparent for as long as five years after the "treatment" has been completed, and thus the victim as well as the operator is lulled by a false security. Sooner or later if the dose has been sufficient for permanent removal, telangiectasia will appear with dryness and scarring of the skin, sometimes leading to atrophy, and always producing a fertile soil for the development of highly malignant types of skin cancer. It is a lamentable fact that there is as yet no means whereby this company can be legally prohibited in its practice, but the physician can do much to

prevent their actions by sympathetic and intelligent advice on the subject of superfluous hair. The Bureau of Investigation of the American Medical Association will appreciate all communications and reports of cases of damage from the use of *Koremlu Cream* or the *Tricho System*.

Superfluous hair is produced when the fine lanugo hairs of any part of the body become larger, coarser and darker. This condition commonly appears in individuals with definite evidence of endocrine imbalance, but the reasons for this imbalance are as yet obscure and no treatment with internal glandular preparations has proven satisfactory in preventing or inhibiting the growth of hair. We have then only the application of some mechanical means for removal of superfluous hair. Some methods which are generally unsatisfactory and even dangerous have been discussed. The only way that hair may be permanently removed without risk of dangerous sequelae is by means of electrolysis. This method is painstaking, delicate and prolonged since it requires that each hair follicle must be destroyed and removed separately. This is accomplished by applying the positive electrode of a galvanic current to the skin of the patient and introducing the negative electrode in the form of a fine needle into the hair follicle. The current is measured by a milliammeter controlled by a rheostat, the effect of the electrolysis depending upon the strength of the current and the time of application. One must be careful not to prolong the electrolysis so that scarring results. The small dilated blood vessels that occur about the nose or cheeks and localized telangiectases resulting from x-ray or radium may be destroyed in this same manner.

The average medical man is so often engrossed in the physical health or the life and death of his patients that he is more or less liable to treat lightly the request for relief of cosmetic defects. And then he feels that he may be labelled as a "beauty doctor" and considers much of this work belongs to the beauty parlor. But the modern intelligent girl or woman realizing the shallowness of the optimistic claims for the average cosmetic preparation, is searching for truthful and intelligent advice from her physician. A

disinterested or evasive answer from her physician only causes her to lose confidence in the medical profession as a whole and drives her into the hands of the charlatan.

One has only to witness the complete change of mental outlook in the young girl relieved of her embarrassing black heads and pimples to realize the value of treatment in acne vulgaris. Too often we are prone to think the boy or girl of fifteen will "out grow" their acne. Many of them will but the resulting scars will be decidedly unsatisfactory. One must freely admit that the basic cause of acne is in the great unknown field of endocrinology, and that as yet we have no means of prevention or treatment from this angle, but much can be accomplished by the judicious use of local applications. The individual acne case is a law unto itself, and there is no single application that can be advised for all cases. In general the routine application of drying agents in the form of soap and water and lotions with the regular removal of the blackheads by a physician can be recommended. Salves, ointments and cold creams only add oil to an already greasy surface. The best single remedy that can be used is the intelligent application of the x-rays, but here again the individual patient must be treated according to the type and extent of his or her acne with due allowance for the age of the patient, and with *careful computation of the dose and amount of x-ray given.*

In all probability relatively few ordinary moles or nevi ever become malignant if left wisely alone, but on the other hand none that are properly removed ever become malignant. There are many individuals with pigmented nevi on the face in whom there is little or no danger of irritation and thus there is little necessity other than a cosmetic one, for removal of the tumor. Thus moles must be considered quite often purely as cosmetic defects, and as such the resulting scar or defect is a very important item. There is nothing more disappointing than to witness a rapidly growing melanoma as the result of the misguided attempts of the barber, the beautician, the cancer quack, or doctor to remove a mole with acid, pastes, silver nitrate or tying with a string. The ordinary

pigmented mole is not radio-sensitive and the use of x-rays or radium is not only useless but possibly deleterious. In the treatment of the vascular nevi with the exception of the port wine stain, the opposite is true. The most advantageous way of treating the pigmented mole, both from the cosmetic as well as curative standpoint, is by means of electro-cauterization. Complete removal may be effected with a minimum of discomfort and a minimum of scarring with this means when in the hands of an expert operator. The removal of tattoo marks, areas of pigmentation, warts or telangiectasia may be accomplished in the same manner. However, one must not assume from the above statements that electro-desiccation is a panacea to be used to the exclusion of all other methods. Each case is a law unto itself and we must be in a position to choose the correct method of treatment, whether it be plastic surgery, electro-desiccation, radium or x-ray.

Finally, we would like to stress the fact that more and more the public is seeking relief of their real or supposed cosmetic defects, and the medical profession should lead in the dissemination of correct knowledge and application of the valuable aids at hand for the removal of these defects. Let us have a more careful consideration of the patient seeking cosmetic advice, recognizing the fact that many of these individuals may cause themselves much damage by turning to the unintelligent beauty operator for advice.

DISCUSSION ON PAPER OF DRS. JONES AND ALDEN

Dr. G. T. Bernard, Augusta: I enjoyed the paper very much and think we should feel indebted to the essayists for bringing these somewhat trite things to our attention.

I will only mention two or three points. First, the treatment of superfluous hair. I think Doctor Alden has shown very conclusively that at present there is only one legitimate method of removing superfluous hair, and that is the electric needle. The varying kinds of removal are nothing more or less than mechanical. The hair is removed to the skin, but returns. Every roentgenologist I know of refuses to treat superfluous hair with the x-ray. Temporary epilation can be accomplished by means of the x-ray, but permanent removal means atrophy of the skin with telangiectasia, with late after-results, possibly degenerations, that may lead to cancer, so it is not to be considered at all. The great difficulty that I see in the electrolytic treat-

ment of superfluous hair is that it requires so much time and patience that it is difficult to find men who are willing to devote the necessary time and patience to it. If we cannot take time ourselves we can certainly advise our patients not to use dangerous compounds, and try to direct them into the right channels where they can procure adequate treatment.

The subject of acne is deserving of serious attention. Much can be accomplished by the removal of this trouble. Oftentimes acne is very improperly treated because we do not take the trouble to find out how to treat it properly. It is within the scope of everyone to learn the basic things in the treatment of acne which will keep it from the deforming scarring until nature overcomes it. Whatever may be the cause, it is a disorder of puberty. Schamberg says that it commonly goes away when maturity is reached. The component parts of it are greasy skin and blackheads. The chronic forms are very difficult to treat, but under proper management it can be held down and much can be accomplished. The time when acne appears is at the time when the whole glandular system is in a state of upheaval and the glands are upset, and if an extraneous infection gets in we are likely to have a very disfiguring condition.

Dr. Francis Blackmar, Columbus: I had a patient not long ago who had black teeth. The dentist had worked on her for a long time, had scraped the teeth and they would remain white for a while but the condition would recur. The dentist refused to scrape them again for fear of injuring the enamel permanently. She consulted me because of a tonsillar condition and I noticed the black teeth. On investigation I found that she had had acne and had been using an oriental face cream. Upon examination, found heavy quantities of lead. Upon stopping the use of this cream she no longer had black teeth. There was no blue line or other evidence of lead poisoning, but this oriental cream should be abolished. I have not removed the tonsils as her neuritis was a result of the use of the cream.

I would like to ask Doctor Alden about the effect of hydrochloric acid used in an attempt to make hay fever patients more comfortable. There seems to be a tendency when a tolerance is reached for mineral acids to produce acne. When this is stopped the acne passes away, much like a dermatitis due to iodides.

I would also like to mention thallium acetate. It seems that this has no local effect at all. It has no effect until after it has been absorbed. If this is true why use the paste and not know how much you are going to get and run the risk of thallium poisoning? I mentioned this to a very intelligent veterinarian at home and at my suggestion he purchased a large quantity to use on dogs. On double the dose commonly used for people there was no effect on dogs. Thallium acetate is evidently without effect on dogs, but it makes all the hair fall out in the human, except the eyebrows. I wonder why there is this difference.

Dr. J. W. Palmer, Ailey: I wish to thank Doctor

Alden for his paper for I consider it very valuable and timely. I think it would be a great mistake if the laity did not get this information. I do not know just what general committee can give it to them, but I think it should be given to the public through the daily press.

Dr. H. S. Alden, Atlanta, (closing): On behalf of Doctor Jones and myself I wish to thank the discussers for their remarks.

Regarding Doctor Blackmar's question about the "Oriental Face Cream". I think this preparation is listed by the American Medical Association as one of the dangerous cosmetics containing a large quantity of mercuric salts.

I have never observed any case of acne which I considered due to hydrochloric acid.

It is probably true that thallium acetate is only absorbed by the lungs or gastro-intestinal tract and not through the skin on which it is applied. The manufacturers of "Koremlu Cream" list the amount of their preparation necessary to remove hair on various parts of the body, the amount varying inversely with the distance of the part from the face. For example, the quantity necessary to remove hair from the upper lip is much less than that for removal of hair on the legs.

By way of disseminating information to the public we had hoped to have an exhibit of advertised cosmetic nostrums at this meeting, but were warned away from it by the possibilities of suit, however I do wish the public could be correctly informed upon these matters.

MELANURIA

S. N. Blackberg and Justice O. Wagner, New York (Journal A. M. A., Feb. 4, 1933), observed that melanuria has been reported as occurring in a variety of apparently unrelated pathologic conditions, such as melanotic neoplasms, wasting diseases, intestinal obstruction, lobar pneumonia, pernicious anemia, extensive liver destruction, exposure to the sun's rays, and after roentgenologic treatment. A survey of fifteen cases of melanotic malignant growths treated at the Presbyterian Hospital during the past ten years revealed the fact that melanin was found in the urine of only four of these patients. The author's results with various tests showed so marked a lack of agreement that they adopted a procedure comprising the essential features of concentration, precipitation and resolution. Their test is as follows: 1. A twenty-four hour specimen of urine is evaporated to one-fourth of the original volume. 2. One gram of potassium persulfate is added for each hundred cubic centimeters of the concentrated urine. 3. At the end of two hours, an equal volume of absolute methyl alcohol is added. The precipitated melanin is allowed to settle. 4. The precipitate is filtered off and washed with water until the washings are colorless, then washed with methyl alcohol, to remove any soluble pigments remaining. Finally, it is washed with ether. If the test is positive, there remains on the filter paper a brownish black precipitate, which can be dissolved off with alkali—most conveniently with a 5 per cent solution of sodium hydroxide. Acidification of the alkaline solution causes a reprecipitation of the melanin.

SYMPOSIUM ON A PUBLIC HEALTH PROGRAM

THE PHYSICIAN'S PART IN THE
PUBLIC HEALTH PROGRAM*

J. A. REDFEARN, M.D.

Albany

It is the duty of the physician to urge employment of county or district health officers, because these agencies are essential to the promotion of preventive medicine. Constructive criticism may be made directly to such agencies, where they exist, but indirect complaints against public health measures or officials do no good and may do harm.

Preventive medicine is the answer to the charlatans of our day. Our health officers, going about doing good along the highways and byways, must necessarily see personally our people and explain the safety of prevention on the one hand, and the danger of some misinformation obtained from advertisements and radio lectures on the other. Patent medicines extract large sums from our people who would be much better off if they would share part of this with their physicians, and keep the remainder for other useful purposes. You and your own family do not spend your money for such nostrums, then why permit your patients to do so?

Doctors frequently keep silent when they should speak for themselves. For years they have joined the dentists in urging the people to have their teeth examined, thus causing formation of this good habit. All along we have known that it is much more important to have a periodic check-up of the vital organs. Many people live long lives without teeth, but they cannot exist without a heart, liver, kidney or lung, all of which may be neglected and mistreated for years. Public health service is trying to correct this through publicity and urges upon the citizens of Georgia the benefits of periodic health examinations.

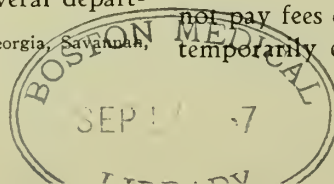
Hoarding knowledge is far worse than hoarding money. It is our duty as physicians and as citizens to support the several depart-

ments of public health. The Department of Vital Statistics deserves more wholehearted support. Certainly each birth and death should be recorded. Report should be made promptly of communicable diseases, just as you would sound a fire alarm, for in each instance you may save lives. If you have no county health officer, notify your State Board of Health. Our people want public health measures carried out and they will have their way.

Private practitioners may fear that preventive medicine will reduce their practice. It is true that there is a reduction in malaria, diphtheria, tuberculosis, typhoid fever, hookworm, scarlet fever, pellagra, dysentery and smallpox through public health work or preventive medicine. However, where these diseases are rampant, poverty is the result, but when these diseases are prevented the people are better able to pay for the other ninety per cent of illnesses to which they are subject, so we should make our work and instruction thorough. Where doctors fail to take interest in public health civic clubs assume leadership and may be over enthusiastic.

Free clinics are necessary in most sections, but should be supervised by practicing physicians rather than misguided enthusiasts. I believe that we are agreed on this. Part pay clinics are proving beneficial and satisfactory to both patients and doctors in large cities. The Cornell Clinic was organized in 1921 with departments covering the entire fields of medicine and surgery. A general admission fee of \$1.50 is charged and very reasonable fees for x-ray, laboratory and special treatments. The total cost to patients is probably one-fourth the usual charges. The work is done carefully and conscientiously by well-trained men. The people gladly attend these clinics. The eligibility of applicants is determined by: (1) the income of the individual or family; (2) the size of the family and obligations; (3) usual cost of private rates for the work needed. The eligibles are applicants with incomes so low that they cannot pay fees charged in private practice, those temporarily embarrassed through unemploy-

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ment, previous illness, or other financial emergency, and those who might not be able to pay a private physician for some special work. In time we must work out such a plan in Georgia. It does not seem fair to charge a seventy-five dollar a month and a five-hundred dollar a month patient the same fees.

Correcting physical defects that we may find or have pointed out to us by our health officers is not enough. We must remember that many of our little patients have morbid mental states that, if left uncorrected, may terminate in neuroses and psychoses later. Therefore, mental hygiene should be stressed by physicians.

Departments of health are not adequately supported. Harry H. Moore states: "The people are spending twenty-three times as much for tobacco as for public health work through rural, state, city and federal governments combined. Three times as much for perfumery, cosmetics, and toilet preparations and three times as much for funerals as for public health." Dr. Felix J. Underwood of Mississippi says: "Legitimate, full-time public health service for the people of every county and every state for the prevention of preventable diseases is the best insurance that we have against state medicine. More and more of the thinking members of our profession are supporting public health work, but at the same time are opposing state medicine. The results which properly conducted health work accomplishes, with the profession adjusting itself to meet the needs of all classes of citizens, demanding fair treatment from them, can and will prevent state medicine in any state and nation." Much has been written about state medicine, which is not desired by physicians or the department of public health. However, some of our counties now have only one physician, others two, and more than twenty counties have only three. Sparsely settled sections may soon reach the place where salaried medicine, either from a group of individuals or the state will be necessary.

Some states (N. Y., N. H., Vt.) have passed laws permitting cities or towns to vote taxes to pay resident physicians where necessary. The chief purpose is prevention,

but federal, state and local governments in 1923 supplied 70 per cent of hospital service. Medical organizations pointed the way to state departments of health and then, for the most part, confined their efforts to private practice. Modern scientific medicine reaches only a part of the people so there is now a necessity for providing medical services to entire communities. The Medical Association of Georgia is on record as favoring the control of curative medicine, and its members are expected to care for our citizens irrespective of financial status. Guaranteed salaries in some communities are necessary to retain medical service.

Harry E. Mock looks upon industrial medicine as a "half-way house between the old individualistic form of the practice of medicine and the future community health and medical service." He predicts a revolutionary change in the practice of medicine during the next few years. The close personal relations between doctors and patients have been claimed as relics of prescientific medicine and compared in the position of farm laborers who resented the harvesting machinery; the factory workers who objected to electric power; or the veterinarian who, as a rule, no longer depends upon private practice. Chemists, orchardists, veterinarians, sanitarians, teachers, preachers, engineers, public health officials and others are succeeding without clamoring for a free basis.

Maybe we have got too far away from our teachings to practice the healing art, for most of us when asked how we are getting along will invariably reply in terms of finance, rather than in terms of service. A number of rural physicians have frankly admitted that they would prefer salaries from some source. Some writers admit that the average physician would receive more compensation through state medicine, but claim that it would throttle ambition and give little incentive to prepare for a distinguished career. If we admit this then, we place our profession below that of teaching. Certainly teachers have spent years of study getting several degrees often times, and returning to our colleges and public schools to teach in state schools for small salaries. They inspired

us and now, though old and gray, they are inspiring our children to dizzy heights without serious thought of salary except when it is their turn to go for further study required by school boards.

We can become accustomed to anything in time, though we may do a lot of kicking meanwhile. "Eyeglasses were condemned when first used in England as immoral because they perverted the natural sight and made all things appear in an unnatural and therefore false light. Bathtubs were denounced by physicians when first used in this country as dangerous to health and it is claimed that Virginia put a tax of thirty dollars a year on each one."

Public health will be greatly benefited through advice by physicians on dietetics. We are prone to take too much for granted and fail often to explain the importance of a balanced diet found in milk and milk products, meat, eggs, fruits, vegetables, breads, nuts and desserts if desired. The palate is not always a safe guide, but mothers will permit their children to eat unbalanced diets in the midst of plenty until malnutrition, pellagra, tuberculosis, rickets, or other deficiency diseases develop, while physicians retain unspoken messages, fearful that motives might be misconstrued. Recently a prominent citizen remarked to me that chiropractors specialize in diet. Sanitation, pure foods and diet should be discussed by physicians whenever possible at public gatherings.

In conclusion, the above remarks are not intended to alarm, but to bring to your attention a changing order. Let us view these changes first from the standpoint of public good, and second what is best for us.

REFERENCES

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 Medicine, Its Contribution to Civilization, by Edward B. Veeder.
 Public Health in the Prevention of State Medicine, by Felix J. Underwood.

The Eighty-Fourth Annual Session of the Medical Association of Georgia will be held at Hotel Dempsey, Macon, May 9, 10, 11, 12. All committee, councilor and general meetings with those of the House of Delegates, will be at Hotel Dempsey. The officers of the Macon Medical Society report that excellent arrangements have been made for all meetings and entertainments.

HOW MUCH CURATIVE MEDICINE SHOULD A HEALTH DEPARTMENT DO TO PUT ON AN ADEQUATE HEALTH PROGRAM*

C. L. RIDLEY, M.D.
 Macon

In the beginning let me say that the health officer should stay out of curative medicine, but that he should go the limit in disease prevention, while the medical man should not only practice the curative art, but should rapidly break into the field of preventative medicine.

"The public wants and demands a complete program of health and healing, of which every individual may have the benefit without undue sacrifice, and the public is going to have its way somehow. It always does. We have the requisite knowledge and skill, and we are intelligent enough to co-operate in meeting this need with a plan of our own devising that will take ample care of the best interests of profession and people alike." (Underwood).

Our big problem is that the older medical men had no training in preventative medicine, they are interested only in the care of the sick. The average age of the men now practicing in small towns and rural sections is 52 years. Our young men no longer locate in small towns nor rural sections, but flock to the cities where they may have hospital connections, access to well-regulated laboratories, where they may enjoy social and professional contact with their fellows, and where each one of them hopes to become within 90 days a leading specialist in some branch of medicine or surgery.

We have too many specialists, too many groups and clinics, and a scarcity of general practitioners. Such a status of affairs has made it impossible for the masses to secure adequate medical service, and has made the cost of medical care almost prohibitive for the general public.

Then too, I have my doubts about the type of service rendered by the over-night specialist. Five years or more of rough and

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tumble general practice, when a man will see and have time to study diseases of every type, would be a good schooling for him who desires to specialize in any branch of medicine. This would bring to the public the benefits of modern medical training, would teach the public that much more is necessary in making a correct diagnosis than just looking at a tongue, feeling a pulse, or having a poor fellow say, "ah!" Some fellows would learn that much of a man is found below the neck; others that a fellow with an enlarged prostate may have teeth or possibly tonsils; others would come to know that besides a heart some fellow may have kidneys, that below the diaphragm lies a vast region to be explored, and which is often explored; others that above the diaphragm there is also a field to be considered. Then again he might learn that all ailing children do not have acidosis, nor do all babies have to be bottle fed. Finally, he would see that besides the physical ailments of the human being, there is a psychic part of man which has practically been ignored, and which possibly will bring to his office 60 or more per cent of all seeking his service.

Till that day, when such differences have been adjusted, when all medical men are preaching prevention as well as restoring to health and usefulness those who are sick and those who think they are sick, the state is forced to set up health departments, remove as far as possible the cause of disease, and educate its people in matters pertaining to health. Honest effort to grow a virile race and to develop active, useful citizens should be the first thought of every statesman as well as of each politician. Every safeguard should be thrown around our people, so that they may live long and well, and enjoy a reasonable portion of happiness. Ignorance and disregard of the laws of hygiene and sanitation are perhaps the greatest factors in the cause of unnecessary illness and premature death. To correct this condition, the earnest efforts of both organized medicine and intelligent health administrations will be necessary for some years to come.

The Health Officer

The health officer should in all cases be

a medical man, well grounded in the principles of medicine and sanitation. A few years in general practice would add much to his equipment, with special training in disease prevention. He must be a man of tact, must possess a rugged honesty so that he may deal fairly but firmly with members of his profession and with the public.

All of his time should be devoted to seeking the cause of disease, to disease prevention, to improving and perfecting sanitary conditions. He should be active in the control and prevention of communicable diseases, in the inspection of food supplies, particularly in the production, handling and sale of milk, in the supervision of water supplies, and he should teach the importance of the sanitary disposal of human waste.

The health officer should arouse in the minds of all the people the importance of intelligent medical care of the expectant mother, the baby, the child, the youth, in fact all age groups; he should bring the middle aged to know that the degenerative diseases are just around the corner, and that life might be extended further if the people and the medical men would but take notice.

The health officer should also be active in the detection of defects in children, persuading parents that early correction is necessary and should make every effort to see that these little fellows are placed in the hands of their respective physicians. Activity of this type can but add to the happiness and healthfulness of any community and with such a program no man can justly find fault.

Health Problems in Georgia—T. B.

Let us discuss some of our public health problems common to every section of this state and of interest to all our people. We have about 3,000 deaths annually from tuberculosis and there are approximately 30,000 cases of this disease. The state institution at Alto has cared for about 500 to 600 cases annually. This is about 1-6 of the deaths or 1-60 of the number of cases. The state can never provide hospitalization for this large group. Many will die and many more will become infected while waiting for admission to Alto. Therefore, we must find some other way to solve this problem. Our

medical men are mostly seeing those quite ill and often too far advanced to be benefited. Little effort on the part of the profession is being made to follow up this work and detect early cases, even in families where there are active cases, or where deaths have occurred. We are just sitting by waiting for those unfortunates to become so ill that medical attention is imperative, yet of no avail.

It has been my conviction for a number of years that this work should be carried to the masses, not only in an educational campaign, but that we should seek diligently for the early cases, examine all contacts and all children more than ten per cent under weight. The desire of the state is to find these cases as early as possible, so that treatment may be worthwhile, and to locate the advanced cases so that others may not become infected. In no instance does the state assume or direct the treatment of tuberculosis outside of Alto, but refers to medical men all such cases found.

Some months ago field work was begun by the Department of Health in conjunction with doctors in the several counties. Below is an outline of this work by Doctor Haygood, Superintendent at Alto, who is continuing this work since the death of the State Board of Health at the hands of Governor Russell.

"(1) Case finding: The Georgia State gazetization and clinic operation.

"(2) Case treatment by private practitioner.

"(3) Case follow-up by trained nurse personnel.

"(4) Prophylaxis, to be administered by private practitioners and public health operators.

"(1) Case finding: The Georgia State Board of Health and local health organizations attempt to promote this program only in communities where its details are made familiar to the major number of the local physicians, usually through the county medical society. Since this body might, by ethical reasoning, be considered autonomous in its respective area in matters pertaining to public medicine, an invitation from this group to the state and local health agencies to participate in this activity is usually considered to be a pre-requisite. On receipt of

this invitation the health workers, with the aid of the physicians, visit and invite to the clinic to be held on a date and at a place already determined, principally tuberculosis contacts. Recent records of morbidity and mortality furnish the safest leads to potential contacts. It is reasonable to expect that those living from day to day in the same quarters with and using the same eating and drinking utensils as an active tuberculosis person would have abundant opportunity for becoming infected with frequent and massive doses of virulent tubercle bacilli. By reason of results of this intimate exposure, peoples of earlier periods recognized "consumption" as a family disease, and thought it due to hereditary influences. Probably as much as ninety per cent of our tuberculosis problem will be found in approximately ten per cent of the families where active cases have existed during the past few years. Therefore, accurate registration of tuberculosis morbidity and mortality is essential to simplification and expedition of our program.

"Moreover, we endeavor to impress the public that these clinics are not being conducted merely for the purpose of offering a free examination to all who desire a "bargain" but that they have for their aims the discovery of as nearly all the cases of early tuberculosis as possible, and that only those who have reason to believe they may be victims of the "Great White Plague" are expected to respond. By this method the prospective patients are sufficiently screened as to give us a relatively high, (19.1 per cent) positive and (17 per cent) 'suspicious' cases.

"At present there is only one complete clinic unit, consisting of a trained clinician, a nurse, an x-ray technician and a mobile x-ray laboratory in the field. These facilities and personnel are for the aid of the local physicians in attempting to arrive at a correct diagnosis as early as possible in each case. The patient is requested to choose a physician under whose care he expects to place himself in the event treatment is indicated. To this physician a transcript of the clinic records is promptly forwarded. Under no circumstances are any of the findings made known directly to the patient. He is urged by the clinic per-

sonnel to report to the physician whom he has chosen within three days, even though the findings be negative.

"With adult patients the routine is as follows: A careful history, through physical examination, and x-ray when indicated. Children are handled differently: first, a history is taken, then 0.1 mgm. O. T. is given (first dose) intradermally (Mantoux) with reaction observation forty-eight hours later. Those with positive reactions are then x-rayed. As far as possible, children with positive Mantoux tests and whose roentgenograms indicate pathology (usually tracheobronchial) are given a physical examination.

"A word should be said in regard to the fundamental importance of finding tuberculosis pathology early in children. (a) Because of the pleasing response elicited through the application of logical, but simple, measures of treatment, particularly among white children, and (b) according to Norris and Landis, 'the disease is most fatal in infancy, the heaviest death rate being between six months and two years of age. The disease as it occurs in the adult is rarely encountered in this period. Between the age of five and fifteen years chronic tuberculosis is unusual.

"It is realized, of course, that identification of childhood tuberculosis is not always easy; at the same time diligent effort in this field is liberally rewarded.

"(2) Treatment is not within the province of health department personnel. It is distinctly a function of private practitioners of medicine. Early cases who co-operate with their family physicians can no doubt expect better results than can those suffering from pneumonia or typhoid fever. Whoever conceived the idea that those physicians who are engaged in the general practice of medicine are not competent to administer to the tuberculous was unquestionably the victim of some type of psychosis. The results of his efforts will not be so vastly different from that usually experienced by the sanitarium and the tuberculologists.' "

Surely no doctor in Georgia can object to such a program. Not only is it a humane endeavor, but it places more patients in the hands of medical men. Working together,

the state and the profession will prevent many cases, while thousands of early cases will be detected early enough to respond to proper treatment, and the death rate from tuberculosis will be materially reduced.

Sera and Vaccines

We come now to the administration of sera and vaccines by Health Departments. Probably there has been more criticism of this phase of the public health work than of all others. There are two sides to the question, with the argument in favor of health departments administering such, at least for the time being. Medical men, as a rule, become interested in this work only when outbreaks of disease occur, while the health officer attempts to prevent such outbreaks by mass immunization. Then too, medical men do not consider it within their province to follow up exposures nor to dig very deeply into the sources of infection. This the health officer must always do.

The doctor, in order to exist, must come to the point when he is more frank with his public, and must pass on to the people such measures as will keep them well and then hold available to them accepted remedies that will restore them to health when ill. This to my mind is the doctor of tomorrow.

Our code of ethics, like the average fee bill, is rather hide-bound and should perhaps be modified to meet the times. But two things in all the world remain unchanged, nature and medical ethics. Nature, of course, will never change, but if the medical profession expects to remain an influence for good, it is high time we take our people into our confidence, tell them the truth as we know it, and not permit them to be deceived by those who advertise for pecuniary gain, those who prey on the minds and bodies of men by offering them false hopes for cash in advance. In the fight against the quack and the charlatan, public health workers must serve as "shock troops" till such time when every doctor has been equipped to battle in disease prevention and is ready to enlist against the common enemies of ignorance and unconcern now prevalent in the minds of our people as relates to hygiene and sanitation.

Let us consider the question of diphtheria

control. If some live agency does not take the lead in diphtheria prevention, not much headway will be made in reducing the mortality, when, with our present knowledge, diphtheria should be absolutely stamped out and should become one of the rare diseases. We owe this to the children of the world; every medical man should carry the gospel of diphtheria prevention into each home he visits and should immunize all children in families for whom he works. This (diphtheria) smallpox, and typhoid prevention should be a part of each doctor's daily work, but till that time, when they (the doctors) accept the responsibility, health departments will be active in this direction. The average doctor of today does not advise parents to have their children immunized against diphtheria; few of them do Schick tests before or after the administration of toxin-antitoxin or toxoid. None will say that such information should not be passed on to the people, even in the most remote sections, and since medical men are slow in advocating anything that looks like publicity or solicitation, it then becomes the duty of the state to pass on to all its people such wholesome advice of such disease preventing and life saving agencies as toxin-antitoxin, smallpox and typhoid vaccine, anti-tetanic, and anti-rabic serum.

The interest taken in smallpox prevention by schools, colleges, and business concerns, where many people are employed, has been more effective in controlling this disease than has been the influence of the doctors of America. We seldom hear of a doctor advising smallpox vaccination, unless there be an outbreak. They should vaccinate every baby and, with the United States Public Health Service requiring that every emigrant or visitor from a foreign country be vaccinated, who does not submit evidence of successful vaccination, in a few years we would have no more smallpox in America.

Anti-Rabic Vaccine

Let us consider the question of the administration of anti-rabic vaccine. One of the mysteries of life is how the average fellow who owns a dog manages to feed it, and when such a person is bitten by a rabid dog, usually all of his children, his wife and his mother-in-

law are bitten at the same time, and there is little or no hope for the doctor to secure a fee for a long drawn out service. Fortunate is the doctor who can refer such cases to his health officer, and again fortunate is the fellow who has a health officer to care for him and his family at such a time. In Bibb County we do not limit our service to such people in the county, but care for many coming in from adjacent counties.

In Georgia we find four times as much typhoid as is shown over the nation as a whole. With proper sanitary measures enforced and vaccination we can relieve our state of this indictment, and it is up to the medical profession to do it as there are only 31 counties, of the 161, with health units, and these counties show a lower typhoid incidence than those without adequate health service. Doctors should vaccinate all whom they may induce to take the vaccine, and when a case occurs they should seek diligently for its cause and should urge vaccination for all contacts. Those having the disease should be watched and stool examinations made so that we may know the carriers, as no doubt many cases occur from such. Proper disposal of human waste first, then vaccination with supervision of carriers will solve our typhoid problem.

Some medical men contend that health departments should not administer vaccines and sera at all, others that these agents should be administered only to those unable to pay. Yet, when we stop to think this matter through, health units are supported by the tax payers and they are entitled to some return for their money and the more wealthy they are the more they put into health departments and the more they are entitled to some service in the field of preventive medicine.

Had the medical profession done the things advocated by health departments and accepted by the profession as worthy and worthwhile measures in disease prevention there could never have been any excuse for the existence of health departments as now operated, and when the medical profession assumes its place in preventive medicine, every man, everywhere doing the things he should

to prevent avoidable disease and premature death, then the activities of health departments can be restricted to a more limited field.

I take the position that it is imperative at the present time that health departments go into the field of preventive medicine absolutely unhampered and with the hearty support of the medical profession till such a time when the medical profession is ready to assume the responsibility of disease prevention as well as the care of those ill.

DISCUSSION ON PAPERS OF DRs. REDFEARN AND RIDLEY

Dr. J. D. Applewhite, Macon: These two papers are very timely and the discussion they bring out should bring about a better understanding between the public health officer and the man practicing medicine.

Medicine is divided into two phases, the curative and the preventive. We have all been practicing the first but have not been as active as we should have been in the preventive side of it and civic groups, as was brought out, have begun to demand these preventive measures. Many places have been engaged in organizing for this purpose. I think the public health officer should never indulge in curative medicine. This is sometimes difficult, for physicians in his community refer patients to him and it is difficult to refuse to care for them. I think it is the duty of the health officer to educate the laity in those measures that have proven helpful in preventing disease. In this way he should have the active support of the profession in the vicinity in which he works. If we do this and get our people as interested in all diseases as they are in certain rare diseases we will accomplish much. I do not believe there is a sane person in Georgia who when he becomes exposed to a particular disease needs a health officer to tell him that he should be taken care of. I think the health officer should try to educate folks to a point where they will be interested in all diseases rather than in rare diseases.

Dr. J. W. Simmons, Brunswick: I have been listening with a great deal of pleasure to these papers. Some of you may recall that at the meeting of the Southern Medical Association in Miami, I presented a little skit entitled, "Where Do We Go From Here?" calling attention to the so-called state medicine, industrial medicine, contract practice, the application of big business to medicine, and the gratuitous advice we were receiving from Mr. Henry Ford and some other philanthropists who were telling us how to run our business.

Dr. Redfearn's optimism is admirable in the extreme, but it does not buy shoes for the baby. The impression remains in Georgia that the Department of Health has not received the wholehearted co-operation of the medical profession itself that it should have received I feel that I have a right to speak in this respect for my county was the first in the state to adopt the

Ellis Health Law. Before the adoption of that law we already had a full time health officer and a full time nurse, with free school inspection. Ours was the first city in the southeast to adopt this. I was berated by Dr. Fort and one or two others because my county representative was not influenced to let the Board of Health stand as it was. I talked with this representative and he told me that this committee had received more communications from physicians in Georgia (he did not say whether osteopaths, naturopaths, or Christian Scientists) calling for elimination of the activities of the Board of Health and approving the reorganization plan than he had received letters from those wishing it to remain as it was, or to extend its activities beyond the plan under which it was operated. I give you this information for what it is worth, so that you may do some missionary work in your home towns.

As Dr. Ridley pointed out, it is the profession's fault because demands arising from knowledge of modern methods of prophylactic medicine are being answered by politically and civically organized health organizations, employing salaried medical and nursing service bordering on competition with the general medical practitioner. We have been too modest or too negligent, both as family and community advisers, so lay organizations allied with medical and nursing institutions sponsored by the public and paid for from taxes are doing the things we should be doing. I am going to be accused of being intensely unethical because of the statement I am going to make now. We should keep card indices, as modern business does; and should keep a list of all the babies we deliver, of the children in the families we visit, and remember their birthdays with an attractive little card. Also from the indices we should know when the time comes for administering diphtheria anti-toxin, and we should drop a little card to those babies and state that "this week (or this month) you should report to my office for the administration of diphtheria anti-toxin," or for the administration of typhoid vaccine or for smallpox vaccination. If we doctors used half the salesmanship that modern business uses we would be doing a thing that is not commercialistic, but that is badly needed. Just think, some of you have lived in the same town for many years, I have delivered 1600 babies in my little town, and just suppose I had immunized those babies against diseases with the vaccines the state supplies—the Board of Health would have little to do. Don't you think our patients would think more of us if we took more interest in them? You know as well as I do that nearly half of the people in the United States know fully half as much about prophylactic measures that have been advocated in medicine as we do. This demand for preventive medicine is being heard and met. Just think where we would be today if every family physician had done his duty in caring for the families—you might almost say those families who are our wards in the matter of medical advice! It is not too commercialistic to think of that. It is the root of altruism, and the spirit that existed when the old family physician carried his saddle bags, before modern medicine was thought of.

Dr. Thomas J. McArthur, Cordele: I am sure those who have been active in public health work in Georgia have observed all these years the lack of interest and lack of co-operation on the part of the medical profession generally, and have realized that this lack of co-operation and interest on the part of the average physician in this state is responsible for the slow progress that is being made in public health work, and is the cause of the rapid progress that the different medical "paths" have been making. We frequently hear men not interested in public health work complain of the work the public health man is doing, and complain he is competing with him, that he is doing work which he should be doing himself, and for which he should be paid by the individual. In large portions of Georgia we all know there are many individuals who are unable to pay anything like one hundred cents on the dollar for the work that he needs. If the general practitioner wants to take a selfish view of it, how much more remunerative would his practice be if every family was so situated as to be self-sustaining. He could not only become a good patron of every other business in the community but a good patron of the doctor. It has always been true that we have a large percentage of people in the communities in Georgia who have to have free medical care. In recent years this difficulty has increased and if the medical men, particularly in the rural sections and in the small towns were co-operating with the public health work and with the Department of Health as they should do we could reduce the number of individuals who are unable to pay the doctor for his services, thus making conditions more remunerative for the practicing physician. There is something lacking on the part of those physicians. As was said today, and is said practically every time public health work is discussed, there is something lacking with us. We are not discharging our duties to ourselves, our duty to the public and to the government when we do not give them our knowledge and our sympathetic co-operation. If the doctors do not do it themselves, if they do not furnish the initiative and take the lead, and assist in this work, someone else will do it. The charities and the philanthropists, the state and federal governments are going to do it and do it their way, and we will have no right to complain. The medical profession in every community should be leaders, not only co-operating, but directing, and until we do this we will become less and less pleased with the situation.

Dr. T. F. Abercrombie, Atlanta: I am particularly glad that this subject has been brought to our attention, and that it is being discussed in the way it is. If most of you already have kept up with what the State Department of Health is doing, and have read your literature, you know we have tried in almost every instance to put the burden of the practice of preventive medicine on the family physician. In nearly all of our literature we say "Consult your family physician," because we realize that if we had all the money in the state treasury we could not do the work. We could not give adequate health protec-

tion without the aid of the physicians. Since the economic depression has been on we have had complaints that the health departments were doing work that the physician should be paid for, particularly in immunization and vaccines. We have had many of them, but whenever a community or a group of individuals is ready to assume this phase of the work we are ready to step down and out. As I conceive the duty of the Department of Health it is to render service to the three million people in Georgia. That service I think is education, expert advice and supervision. If we seemingly sometimes step over into the field of the practice of medicine, as has been said here today, it has been because of a definite demand on the part of the people of the state, and you may be sure that it is not because we wish to practice curative medicine, but because we wish to protect the people against communicable diseases. I appreciate this frank discussion, and at any time, we appreciate frank criticism. When we start a program, and we never start one unless we feel that there is a definite demand for it, we then try to consult the physicians in the community before it is put on. We go further than that. We have many workers going out from our office and they have definite instructions never to start any piece of work without first calling on the physicians in the community and letting them know what we are trying to do, and seeking their support.

Dr. Marvin F. Haygood, Alto: I would like to be honored by receiving credit for doing preventive medicine, although I am now charged with the administration of a large tuberculosis sanatorium. Having spent more than a decade as an administrator of measures of public hygiene, I may be pardoned for offering my opinion as to the basic functions of a public health department. These can, in my judgment, be summed up as follows:

1st. Sanitation, or creation of a clean environment—water purification, milk sanitation, careful disposal of sewage, and protection from insects, animals and human beings capable of transmitting diseases.

2nd. Public health education. There is, of course, general agreement that public instruction is, in a large measure, the function of our public school system. Yet it is fully realized that the text materials must spring from and the stimulation of a program of health education must originate with the physicians and the hygienists.

3rd. The demonstration of the value and the practical methods of effecting immunity against the more serious communicable diseases is clearly a function of health departments. But when and if the private practitioners assume the obligation of "carrying-on" the public health officer should no longer take the initiative, but should at all times lend his co-operative efforts to local medical organizations.

4th. The investigation and discovery of mass pathology is one of the most serious of all the obligations of the health department. The location, and placement of persons afflicted with such conditions as tuberculosis, cancer, diabetes, nephritis and the like

particularly in their early stages, is a much needed service. If the discovery is made, patient and physician be brought together early, it would not only prevent much unnecessary suffering and save tens of thousands of lives, but would very markedly curtail the use of patent medicines and irregular and unqualified practitioners of various cults.

The coordination of public health administration and private practice is the goal which each member of the Association wishes to realize. When there is established a clear understanding of the needs and function of each group integration of services and smooth performance will be the result.

We should not be misled by the unethical utterances of the grossly careless or the would-be demagogue, that physicians do not favor the practice of scientific and ethical public health, and that the health departments would replace the private practitioners. In Georgia such statements are as far from the truth as the east is from the west.

Dr. J. A. Redfearn, Albany, (closing): I wish to thank the gentlemen for their liberal discussion, but feel that I can add nothing to it.

Dr. C. L. Ridley, Macon, (closing): In answer to Dr. Simmons' query a little while ago as to "Where do we go from here?" we can answer that by another question—"Doctor, where have we been in regard to this matter?"

With your permission I will finish reading my paper in the time at my disposal.

USE OF HISTAMINE IN TREATMENT OF PRURITUS

A. Carlton Ernstone and Benjamin M. Banks, Boston (Journal A. M. A., Feb. 4, 1933), administered histamine subcutaneously, usually in doses of 0.5 mg. twice daily, to six patients with pruritus associated with urticaria and to seven subjects with pruritus due to other conditions. Three of the six patients with pruritus accompanying urticaria were promptly benefited by the treatment. In one of these, lasting and complete relief from itching was obtained. In the other two, complete or practically complete relief was followed by a relapse of pruritus. Subsequent treatment with histamine failed to cause improvement in one of these and was only partially effective in the other. Four of the seven patients with pruritus due to conditions other than urticaria were improved by treatment with histamine. One patient with pruritus vulvae, three years in duration, obtained lasting and practically complete relief from itching. One patient with pruritus of undetermined etiology in the crural regions, one year in duration, was almost completely relieved of his symptoms for more than three weeks. Partial relief of itching was obtained in one patient with generalized dermatitis of unknown cause and in another with kraurosis vulvae. The three patients in this group who received no benefit from the treatment with histamine all had pruritus ani.

THE METHOD OF PRECISION IN THE DIAGNOSIS OF EARLY PREGNANCY* (Aschheim-Zondek Test)

H. F. SHARPLEY, JR., M.D.
Savannah

The diagnosis of pregnancy has heretofore rested with the art of the gynecological examination which at times was heavily burdened. This was aided by one or another of the various methods of precision, or laboratory diagnoses, as they were sometimes called. No single test was outstanding in offering a definite answer.

The Aschheim-Zondek test on the contrary is based on sound scientific principles and in practice gives definite and accurate results. In other words, it meets the requirements of both theory and practice.

Its theoretical background is quite significant. A brief review of the history of its discovery will bring this out. Injections of alkaline extracts of anterior pituitary produced body growth and impaired the maturation of the ovum in rats. Transplants of the gland on the other hand produced excessive sexual development. Transplants of no other gland produced these changes. A comparison of this anterior lobe hormone and female sex hormone (ovarian hormone) was the next observation. The results are quite striking and may be summarized in the following outline.

		Vagina	Uterus	Ovaries
Female Sex Hormone	castrated	+	+	
	normal	+	+	O
Anterior Pituitary Hormone	castrated	O	O	
	normal	+	+	+

+ = oestrus changes
O = no change

The hormone of the anterior hypophysis is the trigger of the ovarian functions. A study of the blood and urine of non-pregnant women showed the presence of anterior pituitary hormone but in insufficient quantity to produce oestrus changes in the laboratory animal. Urine of pregnant women

*Read before the Medical Association of Georgia, Savannah, Ga., May 19, 1932.

produced constant changes in laboratory animals.

From the practical side there are two subdivisions, namely the clinical interpretation, and the test in the laboratory.

Clinical Interpretation

Clinically the results of this test require interpretation as they do not indicate pregnancy altogether.

1. As Aschheim¹ puts it, it is indicative of pregnancy as long as living placental tissue is in biologic contact with the maternal blood. Hence, ectopic pregnancies give positive results prior to rupture. After tubal abortion they give negative results.

2. A dead foetus in utero may give a negative result². Therefore, by repeating the test, allowing sufficient time for the excess of anterior pituitary hormone to disappear after living contact is lost, the life or death of a foetus in utero may be ascertained.

3. A positive result may indicate hydatidiform mole or chorionepithelioma and not pregnancy¹. Use may be made of this point by repeating the test at intervals with patients upon whom a hydatidiform mole has been removed for evidence of a developing chorionepithelioma.

4. Amenorrhea, dysfunctional bleeding, and pelvic inflammation are recorded with a negative result as well as the fibroids uncomplicated by pregnancy and the ovarian cysts. In reference to the latter, there is some skepticism as to reaction of the test to the ovarian tumors on account of the toti-potential nature of the cells of this reproductive organ giving rise to the embryoma or teratoma (dermoid cyst).

Is the growth itself such as the parthenogenetic development of an ovum as in ovarian pregnancy³ able to simulate pregnancy enough to produce an excess of anterior pituitary hormone, or is it due to destruction of the ovarian tissue with a compensatory increase in the hypophyseal hormone?

Positive tests have been recorded in the teratoma of males⁴. Fluhman⁵ has shown there is an excess of this pituitary hormone in the blood of individuals who have undergone bilateral oophorectomy and irradiation. This involves the question of concentration of the hormone in the blood and in urine

during pregnancy and non-pregnancy. Brown⁶ ran a series of 220 cases with an accuracy of almost 100 per cent using blood serum instead of urine. He used rabbits for the test animals. Aschheim¹ used urine with the mouse as the laboratory animal and received two positives out of 60 cases of carcinoma of the genital organs. One of Jones⁷ false positive reactions occurred repeatedly in a patient who upon operation was found to have a large dermoid cyst. He used the rabbit as the laboratory animal.

I have discussed this question of false positives under clinical interpretation as a warning to the clinician. When they occur he should reexamine the patient for evidence of conditions causing ovarian destruction and pituitary hypertrophy.

Do not judge the length of the discussion I have given to ovarian tumors as a criterion of their frequency, for all statistical reports upon the accuracy of the test show that it is a very, very rare occurrence. However, to establish its occurrence and its cause on a firmer basis, all ovarian tumors should be tested prior to operation. I have two in my series to report.

Report of Cases

Case 1. Mrs. J. W. B. had a soft, cystic mass: resembling a five months' pregnancy. The uterus was normal in size, shape, and mobility, and deviated to the left. The right adnexa was the seat of the mass. Diagnosis—Right, ovarian cyst. The Aschheim-Zondek test was negative. At operation a three and one-half pound cystadenoma was removed.

Case 2. I was referred an emergency test for suspected ectopic pregnancy. The test was negative. At operation a twisted cyst was found.

5. To complete the clinical interpretation the early abortion should be mentioned. Discrepancies may exist between clinician and the laboratory in cases of very early abortions. The early abortion may be classified as a case of irregular bleeding which of course would result in a positive reaction.

The Test In the Laboratory

With the clinical interpretation in mind, let's discuss the test in the laboratory using Friedman's modification. The chief laboratory problem at the present time appears to be the false positive and the false negative.

The false positive has already been consid-

ered under clinical interpretation, which is beyond the control of the laboratory. When such a false positive arises it is necessary for the laboratory to stand on its own feet by being free of its own false positives. These false positives may be eliminated if: the following precautions are taken.

1. The rabbits should be kept on hand 31 days.

2. They should be isolated from all other does one week prior to the test⁸.

3. All sexual excitement should be avoided and the examination to determine sex should be made at the time of purchase and not immediately prior to a test to eliminate the possibility of ovulation being produced by the examination or a male being placed among the females.

I prefer not to buy in the open market and have established a rabbitry where all animals are kept separate except the litters. The cages containing the bucks are well marked. Besides this, six isolated rabbits are kept on hand in the laboratory. The rabbitry serves only as a feeder to the laboratory, replacing those as they are used in rotation.

If all measures are employed to prevent false positives, there will be less need for the laboratory to retreat when they occur by saying, "Possibly that rabbit did make contact with a male." Males are not used in the test and should not be present. One can become quite expert in the determination of sex with a little practice. The only reliable determination of pregnancy in the rabbit is isolation for 31 days. The urine of the pregnant rabbit does not give the reaction¹.

In regard to the false negative, I note that in reviewing the literature many observers do not quote their technique. Some of those who use the single injection method appear to have more false negatives. To bear out this point, Reinhart and Scott⁹ use the re-inoculation method; that is, repeating the injection if the ovaries were found negative at a laparotomy. This second injection did reverse the reading in some cases. Wood¹⁰ re-received two false negatives using the single injection method and none after the reinoculation method was employed. Friedman and Lapham⁸ found the single injection method unreliable and adopted the method of repeat-

ing the dose of 4 cc. three times a day for two days.

If the double injection method is employed giving a dose on two consecutive days, the frequency of false negatives will be lowered.

The dosage of urine seems to be of small importance. The reaction occurs with a single injection of 5 cc. Dosage larger than 20 cc. are not necessary and they may increase the mortality rate of the rabbits. Friedman and Lapham⁸ lost 3 out of 112 rabbits. Kincaid¹⁷ lost 8 out of 66 rabbits during a heat spell, using doses between 10 and 20 cc. I have given doses in a few cases as high as 28 cc. I have lost one rabbit that had received 65 cc. of urine and had a laparotomy within a period of four days.

The time between the injection and autopsy is a very important factor. Schneider¹² has obtained a positive in 12 hours, but uses 24 to 30 hours as his routine time. Davis and Walker¹³ quote a case negative at a laparotomy 20 hours after the injection. The rabbit died during the night and was found positive the next morning. Friedman and Lapham⁸ use 48 hours. They state that 18 hours is sufficient for the majority of the reactions to occur. Too much faith should not be placed in negative results.

I have injected four female rabbits of the same age with exactly 5 cc. of urine at the same time, and performed autopsies at 12, 24, 36, and 48 hours, preserving the rabbits with ice until they could all be reviewed at the same time. The first two, that is, the ones examined at 12 and 24 hours, failed to show any reaction. The remaining two were positive, that is, the ones examined at 36 and 48 hours.

Technique

Inject 10 to 15 cc. at a dose, giving two such doses 24 hours apart and performing a laparotomy or an autopsy 36 to 48 hours after the second dose.

In cases where speed is necessary, two rabbits are immediately injected, performing a laparotomy 12 to 18 hours after the injection on the first rabbit. If found negative, both rabbits are reinjected. The first rabbit may be re-examined in the next 12 to 18 hours, according to the case at hand and the judgment of the surgeon. The second rabbit

completes the usual technique, giving a definite answer in case of a negative result and also serves as a time saver in case of a possible mishap to the first rabbit.

Results

In my series of 38 cases including 16 controls, 13 of which were known to be pregnant and three not pregnant, all checked with the clinical findings:

In a large per cent of the 22 unknowns the results of the test reversed the prevailing opinion of the patient or physician, or both. The results have all been substantiated by their present clinical status, although not all have been delivered at this time.

Out of six cases of suspected fibroids two produced a negative test and four proved to be pregnancies. One of the latter was a fibroid complicated by pregnancy. Two ovarian cysts gave negative results. One of these was a suspected ectopic pregnancy.

Pregnancy was ruled out in two cases of amenorrhea of lactation. It was also ruled out in four cases of amenorrhea, delayed menses, or irregular bleeding. In six cases it substantiated the diagnosis of pregnancy at about the time of the second missed period. The earliest case in this group was ten days beyond the first missed period.

The test was made on the following two patients with endocrine disturbances:

Case 1. Mrs. L. D., a very obese patient, age 31, developed amenorrhea followed by symptoms of pregnancy such as nausea, backache and bladder irritability, several months ago. The uterus was slightly enlarged and softened at that time. The test was negative. To date the clinical findings substantiate the test.

Case 2. This patient had amenorrhea following a thyroidectomy. The test was positive at that time. To date the clinical findings substantiate the test.

Conclusion

This hormone test is the method of precision in the diagnosis of pregnancy provided the clinical interpretation is concluded. Care in the isolation of the rabbit and the use of the double injection method will help to eliminate the false positive and the false negative.

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DISCUSSION ON PAPER OF DR. SHARPLEY, JR.

Dr. Lawrence Lee, Savannah: Dr. Sharpley has left very little for me to say. He has been so thorough in his paper and has taken so much care in producing it that it is of great value.

If this test proves to be as accurate after years of use as it promises to be, it will be an invaluable one in obstetrical practice. It is very important for many women to know as promptly as possible whether or not they are pregnant. Some work and have to arrange and plan to give up work while many have summer vacations to plan for and important engagements which pregnancy might interfere with. It is scarcely possible to enumerate the various reasons why an immediate decision as to the diagnosis of pregnancy is necessary. A trivial thing like having a molar tooth extracted might cause a miscarriage in the presence of pregnancy.

Recently I had two cases in which this test was of the greatest service to me. In the first case, the patient was most anxious to have a child. She had been married about ten years. In 1926 her cervix was dilated and a glass pessary inserted, after a Rubin test had been done which showed that her tubes were patent. Her metabolic rate and Wasserman reaction were done and all the usual examinations were made. She finally consulted Dr. Macomber in Boston, who advised local treatment of the cervix, which he said was clogged with rather thick mucus. This treatment advised by him was carried out for a number of months with no success.

Recently about one year after local treatment was discontinued she came in complaining of nausea, constipation, and vertigo. She was a few days overdue and claimed that she was bilious and thought she needed a dose of calomel. If the calomel had been given it might have precipitated a miscarriage, while this test within two days showed that she was pregnant. Under bromide and corpus luteum treatment her nausea cleared up.

The other patient had a closer call. She had been married since 1925 and was most anxious to have a child. Shortly after marriage she had a profuse leucorrheal discharge and apparently a mild attack of salpingitis. Since that time she had suffered one or more attacks of what was diagnosed as salpingitis and had considerable pain in the lower abdomen. She had been more or less an invalid due to pain in the lower abdomen. I advised her on more than one occasion to have an operation, as she had a definite thickening in her left fornix. She stated that if there was any possibility of her having a child, she would put up with her present discomfort. I finally convinced her to be operated upon provided that the Rubin test showed her tubes were not patent. On the day that she was to go into the hospital for Rubin test, she became unwell, but was unwell for a few hours only. For this reason the test was postponed; later she began to have nausea and a little fever. The Friedman test on her showed that she was pregnant otherwise the Rubin test might have been carried out with disastrous results.

Dr. B. T. Beasley, Atlanta: My interest in the Aschheim-Zondek test for pregnancy is from the standpoint of the gynecologist. Many modifications of this test have been recorded in the literature during the past year, the most popular being the Friedman modification. The test has been fairly well stabilized and accepted by the medical profession as being a very important item in the diagnosis of pregnancy, and a valuable aid in differentiating early pregnancy from other pelvic conditions that simulate pregnancy. It may be utilized advantageously in the following conditions: 1. In diagnosing early uncomplicated pregnancy. 2. As an aid in differentiating early pregnancy from other pelvic conditions simulating pregnancy. 3. As an aid in diagnosing hydatidiform mole and chorio-epithelioma. 4. As a guide in prognosis in the treatment of hydatidiform moles and chorio-epitheliomata. 5. In determining the presence of endocrine diseases, such as hypopituitarism and ovarianism, and hyperpituitarism and ovarianism, characterized by certain types of menstrual disorders. 6. In determining the presence of a dead fetus.

Several investigators have called attention to false positive and false negative reactions, but a satisfactory explanation has not been offered for these false reactions. Kincaid's false negatives evidently were due to his method of interpretation of the reactions. He read as positives only those in which a corpora hemorrhagica was found, whereas a well-developed corpora luteum is as positive as a corpora hemorrhagica.

It has been shown that after metastatic lesions occur following chorio-epithelioma, if the uterus is removed the secondary or metastatic lesions will regress and the patient will recover. Many men in treating chorio-epithelioma use radium and x-ray therapy. As quickly as the Aschheim-Zondek test becomes negative the treatment may be discontinued, but it should be continued as long as the test remains positive.

The Aschheim-Zondek test is also useful in deter-

mining the death of the fetus. We had one case in the Grady Hospital in which fetal death was suspected and we ran the test on the patient and it was negative. We found that woman had a fibroid and had to be operated upon. When going upstairs in the elevator she aborted and gave birth to a four months dead fetus. It has been proved that after the fetus dies the test becomes negative.

According to Aschheim-Zondek, there are three reactions as characterized by the anterior horn of the pituitary. The first reaction is characterized by the very small follicle. This may be present in carcinoma, in fibroids or in cysts. In the false negatives, as I said, there may be a mistake in the interpretation or the patient may have a hypopituitarism. It has been proved by Frank and other investigators that in the presence of a hypopituitarism not enough secretion has been excreted to give a positive test, and this explains one of the false negatives. If you obtain a third reaction the rabbit may have been properly isolated or the woman may have a hyperpituitarism but is not pregnant.

Dr. G. Lombard Kelly, Augusta: I was interested in this paper because I have been interested in the process of ovulation in rabbits. The rabbit differs from other animals in that it does not have spontaneous ovulation. It ovulates only after copulation. Last year we ran a series of experiments in an attempt to see the actual rupture of the ovarian follicle in the rabbit. In some of these animals we used the injection of urine from pregnant women in addition to copulation. In our experience ovulation occurred ten hours and ten minutes after the doe was bred. We used 5 to 10 cc. of urine, injected into the marginal ear vein of the rabbit.

I was glad to see this work going on here in Savannah and have been amazed at the apathy of the medical profession in regard to using this test. Some claim they can tell whether or not a woman is pregnant early enough any way. But this test really makes the diagnosis much earlier and it serves to diagnose other conditions than pregnancy. I was much pleased with the exhibit and wish to commend Doctor Sharpley for both the paper and his exhibit.

Dr. H. F. Sharpley, Jr., Savannah, (closing): I wish to thank all of you for both your kind and interesting discussions. Doctor Lee's two cases are very interesting, well illustrating the practical value of the test.

I would like to emphasize the precision of the test, not in the hands of one observer, but in the hands of many, the per cent of error being very low.

To eliminate difficulties in injecting the rabbits, I select the marginal ear vein and rub a little pledget of cotton dipped in xylol over the course of the vein before beginning the injection. I prefer a number 23 gauge needle, as the lumen of the vein is more easily located with it than with the finer needles which are so apt to pierce the wall of the vein.

THE USE OF DIGITALIS IN PNEUMONIA*

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Whether or not to use digitalis in pneumonia has been a subject for controversy since Ferrier in 1799 first used it in this disease. Ferrier's idea in using digitalis was to slow the pulse rate. It was little used at this time and for half a century thereafter. Traube in 1850 again studied its use in pneumonia and was deeply impressed with the action of digitalis on the vagus.

Toward the latter part of the 19th century and the beginning of the 20th century, we find many noted clinicians ranged on both sides. Carhart, Bruton, Hare and Mackenzie against; Rhomberg, Meyer and Frankel gave it. Gibson was doubtful of its value. Mackenzie, who was probably the greatest clinical student of digitalis in his day, stated that he had never seen good results follow its use in the febrile diseases.

For a short period little mention is made of its use in this connection, but a new burst of enthusiasm in its favor followed the work of Cohn and Jamieson in 1917¹. The general acceptance of its routine use in pneumonia can be considered to begin from this date. Further mention of their work will be made later on. The entrance of the United States into the World War occurred about this time and until 1920 many large groups of cases in the army camps were studied, using digitalis routinely.

The purpose of this paper will be; first, to give the clinical side of its use by an analysis of statistical references, and second, to present the pharmacologic and physiologic action of digitalis. I believe that the action of digitalis in a large percentage of cases of lobar pneumonia is the same as its action on the normal heart, and that its action on the vagus and the cardio-inhibitory center is more detrimental than its possible beneficial effect on the heart muscle.

Cohn and Jamieson made a study of the use of digitalis in approximately 100 cases

of lobar pneumonia¹. In one-half of these cases digitalis was given, and the other half, no digitalis being given served as controls. They found that the electrocardiograph gave evidence of the action of digitalis in the same manner in pneumonia as in normal hearts. They found that auricular fibrillation occurred in 100 per cent of their cases and believed that in this complication digitalis may be life saving. They recommended its use routinely in order that these patients with auricular fibrillation, or 10 per cent may be sure to receive the beneficial action of digitalis. However, their mortality with digitalis was 28.2 per cent, without digitalis 12.5 per cent. This they attributed to difference in the virulence of the organisms. It must be remembered that at this time digitalis was given usually in small doses and it was thought that to secure its effects several days was needed, therefore it should be given early. At the present time, it is known that digitalis may be given in large doses and exert its effect in 2 to 3 hours. Either digitalis or strophanthin may be given intravenously and its effect secured immediately should auricular fibrillation develop and its application thought wise.

The advocates for the routine use of digitalis in pneumonia always cite the work of Stone, Phillips and Bliss². In a study of 871 cases of pneumonia occurring in the army, they present the following statistics as evidence that the giving of digitalis routinely is beneficial.

From Oct. 18, 1917, to Jan. 15, 1918, no digitalis was given. Their mortality at this time, in cases not associated with sepsis, was 17.1 per cent. In measles complicated by pneumonia, 46.3 per cent. From Jan. 15, 1918 to May 18, 1918, digitalis was given routinely in full doses with a mortality of 11.2 per cent and in those cases following measles, 14.8 per cent. It will be seen that the greatest difference in mortality rate occurred in those cases complicated by measles. Further on in their paper, they stated that in the latter period a measles vaccine was used with, apparently, excellent effect. The incidence of measles in the first period being 6 per cent, in the latter period 2 per cent. In the latter period when the vaccine was

*Read before a joint meeting of the Tenth District Medical Society and the Richmond County Medical Society, Augusta, Ga., March 11, 1932.

used, only one died from measles. Their empyema mortality suggest some difference in virulence of the organisms. Digitalis was not used in any of these cases in either period. In the first period, comparable to the non-use of digitalis in the pneumonia cases, their empyema mortality was also high, 63.8 per cent. In the latter period 22.2 per cent. They attribute this to difference in the operative treatment.

In a similar army camp in 1918, 195 cases of pneumonia were treated, in none of which digitalis was used, and the mortality was only 7.7 per cent³.

Burrage and White⁴ in a study of 221 cases, in one-half of which digitalis was given in varying amounts and in one-half none was given, found that in those patients who were completely digitalized, the mortality was only five-eighths as high as in those in which digitalis was not given. However, it was two and one-half times as high in those who were given only small, non-digitalizing doses. They conclude that these cases are not conclusive evidence that digitalis is of value in pneumonia and feel that it should never be given in non-digitalizing doses.

Hirsh⁵ in 1929 gives the following comparisons. In a study of 115 cases, comprising patients of all ages, both sexes and both races. These patients were taken from the services of six different staff men. There was no selection of cases, no evident cardiac pathology on admission and no cases were included which ended fatally within thirty-six hours after admission.

74 cases were given digitalis with a mortality of 43.2 per cent.

41 cases were given no digitalis with a mortality of 7.3 per cent.

Probably the fairest and most complete statistical study has lately been made by Wycoff, Dubois and Woodruff⁶. They studied a total of 742 patients. These patients were taken alternately upon admission over a period of years. Factors such as general care and nursing were the same. No digitalis was given to 404 patients with a mortality of 33.7 per cent. In the remaining 338 cases in which digitalis was given the mortality was 41.4 per cent, an increase of 7.7 per cent. They found an incidence of auricular

fibrillation in only 5 per cent of their cases. They conclude that the routine giving of digitalis in lobar pneumonia is dangerous. That it may be of doubtful value in those cases complicated by auricular fibrillation or auricular flutter.

We now pass to the pharmacologic and physiologic reasons for and against the use of digitalis in pneumonia.

Every practitioner should ask himself: Why do I give digitalis? What are its pharmacologic and physiologic actions in health and in disease? What can I expect from its use?

It has long been the opinion prevalent among medical men that heart failure is the primary cause of death in pneumonia, and it was thought that if the heart could be supported by stimulants for a short period, all would be well. Having been impressed with the efficacy of digitalis in congestive heart failure, it was natural that this drug should take a leading place in the list of heart stimulants used in pneumonia. It was thought that digitalis would slow the pulse rate, thereby lessening the fatigue of the heart muscle, that it would increase its tone and thereby guard against dilatation, that it would increase the force of ventricular contraction and the volume output.

The question is: Does it do these things in pneumonia, and if so, are these effects desirable?

It is now believed that the symptoms of heart failure in pneumonia, the cyanosis, the dyspnea, the tachycardia and the fall in blood pressure, are due more to the effects of the toxemia and anoxemia than to primary heart failure. Any weakness of the heart is caused by these factors and not by causes inherent in the heart muscle itself. Many believe that the cause of death may well be a vasomotor collapse.

Pharmacologists are agreed that digitalis action is always either central on the cardio-inhibitory center, through the vagus, or local in the myocardium. These actions are antagonistic, and its beneficial effect will depend upon which action predominates.

Cushny⁷ and others^{8,9} believe that in health the chief action of digitalis is on the cardio-inhibitory center through the vagus, and that

it increases muscular efficiency only when the heart muscle is inherently diseased and malnourished or the conduction system is damaged.

Auricular fibrillation with cardiac dropsy was the condition in which digitalis first won its laurels and wide renown and in which it still holds a preeminent place. In this affection the condition of the heart is very different from that in pneumonia. The cause of the heart's inefficiency is that the ventricles are bombarded by a great number of weak, and ineffective impulses from the auricles. Digitalis, by elimination of the weak impulses, by increasing the efficiency of the ventricular contraction and by restoring a normal balance between the arterial and venous systems, improves the condition. It acts on an inherently malnourished heart muscle and its action in disease is not antagonized by compensatory vagal stimulation as in health, and it has not the factors of toxemia and anoxemia to deal with.

When the heart in health is slowed by digitalis it is due to its stimulation of the vagus and cardio-inhibitory center and not to its action on the conduction system of the heart as in auricular fibrillation. In health and in pneumonia, in the large majority of cases, the pulse is not slowed by digitalis and the amount of vagal stimulation and the beginning of digitalis intoxication is hard to judge.

Brubaker²⁰ and Howlett²¹ have shown that when the heart is slowed by vagal stimulation, the ventricles are markedly distended and dilated and that vagal stimulation lessens the tone of the heart muscle. Here we have a possible harmful action of digitalis in pneumonia.

Summary and Conclusions:

First, that particular of late the statistical evidence is against the routine use of digitalis in pneumonia.

Second, that in the usual case the symptoms of heart failure are due primarily to the toxemia and anoxemia and digitalis having no effect on these primary causes will be of no benefit in neutralizing their actions.

Third, that a possible harmful effect may be due to stimulation of the vagus and cardio-inhibitory center.

Fourth, that the use of digitalis in pneumonia should be confined to those cases of auricular fibrillation and auricular flutter, and in cases of decompensation or previous decompensation, and then only after careful thought and consideration.

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CLINICAL CASE REPORTS

CHRONIC HEART FAILURE WITH DEATH FROM MULTIPLE EMBOLI

Case Report No. 2.

Medical Division, University Hospital, University of Georgia Medical Department
Augusta

Dr. D. R. Thomas, Resident Physician: This housewife, 43 years old was admitted on August 20 suffering from extreme dyspnea. Both her father and mother died in middle life of apoplexy. The third and fourth pregnancies, 13 and 9 years ago, were complicated by some cardiac disturbance but she had considered herself healthy up to two years ago. Since then she had had shortness of breath on exertion and noted that her ankles were swollen at night; on several occasions she was confined to bed with these complaints. In October, 1931, she became pregnant for the fifth time and in January, 1932, she was admitted on the obstetrical service for observation. At this time she was dyspneic and had moderate edema of the feet and legs. Her blood pressure was 185 systolic; 116 diastolic. The heart was much enlarged and there was a loud systolic murmur at the apex, the lungs were congested and the liver considerably enlarged. Her urine contained a large amount of albumin and many casts. After a week during which she grew somewhat worse a therapeutic abortion was done. Following this there was almost continuous slow

uterine hemorrhage which in 7 days reduced her hemoglobin from 70 to 48 per cent and her red cell count from 4 million to 2.5 million. She had a low continuous fever, marked dyspnea, increasing edema. There was progressive increase in the heart rate with frequent extra-systoles and the blood pressure fell to 90 systolic and 70 diastolic. During the last three days of this second week in the hospital, friction was heard over the precordium just to the left of the sternum. She had no pain. She was unable to take any form of digitalis because it produced violent nausea. She was given two transfusions and with much care improved rather rapidly thereafter though her heart action remained rapid and her blood pressure did not rise above 130 systolic; 80 diastolic. After 38 days in the hospital she was sent home in reasonably good condition and remained comfortable until two months ago when dyspnea again became annoying. Since that time she had grown progressively weaker.

She was pale, moderately obese and in great respiratory distress. There was slight general cyanosis with moderate edema of the feet and legs. The retinal arteries were tortuous and irregular in caliber, the veins overfilled; there was no exudate or hemorrhage. The jugular veins were distended and showed a single systolic pulsation. Both lungs gave signs of marked congestion. The apex of the heart was felt in the fifth left interspace 13 cm. from the midline; cardiac dullness extended 15 cm. to the left in the fifth interspace and 3 cm. to the right in the fourth. The first sounds of the heart were of poor quality, there was a prolonged blowing systolic murmur at the apex, no tricuspid murmur was identified. A rough systolic murmur was heard over the base of the heart, loudest at the aortic area. The aortic second sound was metallic but exceeded in intensity by the pulmonic second. The heart rate was 120, the rhythm normal, the blood pressure, 150-80. The arteries were thickened and moderately tortuous. The abdomen was distended and gave signs of a considerable ascites, the liver extended 5 cm. below the right costal margin and the spleen was readily felt.

The blood showed 50 per cent hemoglobin, 3.6 million erythrocytes. Blood sugar and non-protein nitrogen within normal limits. The urine had a specific gravity of 1.015, contained a large amount of albumin, many granular casts and a few red blood cells.

During her first five days in the hospital improvement seemed satisfactory: dyspnea became less, edema and ascites disappeared and the heart rate fell to an average of 100. At 9:30 on the night of August 25 she woke screaming with pain in both legs: this pain persisted in spite of repeated large doses of morphine. The following morning both feet were white and cold, both femoral pulses were weak, the left popliteal could be felt but not the anterior tibial or dorsalis pedis; on the right no pulse was felt below the femoral. Intense pain persisted throughout this day, during the afternoon there was a rapid rise in temperature and pulse with active delirium. By noon of the 27th the temperature was 105 and the pulse over 140, the right

foot showed purple discoloration over the entire dorsal surface and the anterior third of the plantar area. The temperature continued to rise during this day and in the afternoon the pulse became totally irregular while the heart sounds were characteristic of auricular fibrillation. At three a. m. of the 28th there was a generalized clonic convulsion lasting several minutes, following this the patient became stuporous with extreme cyanosis and stertorous breathing. Urine on this day showed much albumin and very many red blood cells. The temperature rose all day, reaching 108.8 at midnight, death occurred soon afterward.

Clinical Diagnosis: Arteriosclerosis, general arteriosclerotic heart disease, hypertrophy, dilatation, congestive heart failure, multiple emboli.

Dr. Samuel Lichenstein: At necropsy the peritoneal and pleural cavities were free of fluid. There was pulmonary congestion and edema. The heart weighed 555 gm. The apex of the left ventricle showed a well marked area of fibrosis with thinning of the wall. There were many partially organized thrombi adherent to the wall of the left ventricle. The valves showed no disease. The coronary arteries were thin but firm and irregular in caliber. The aorta was normal. The liver and spleen were large and exhibited marked passive congestion. The kidneys were large and each showed several anemic infarcts. Permission to open the skull or dissect the limbs was not secured.

Anatomic Diagnosis: Cardiac hypertrophy and dilatation, infarct, healed of left ventricle, mural endocarditis, left ventricle, infarction of kidneys, passive congestion of viscera.

Dr. V. P. Sydenstricker: In the light of the autopsy findings it is possible to trace the sequence of events leading to death more clearly. The left ventricular infarction was almost certainly the cause of the grave cardiac enfeeblement last January. At that time we blamed severe anemia and low grade infection for the poor heart action, great depression of blood pressure and even for the pericardial friction. Pain is so much a part of the picture of coronary occlusion that we are apt to forget that it is not always present. The infarcted area served as a locus for the formation of the mural thrombi, fragments of which produced the terminal embolic phenomena. It is interesting to speculate upon the relation of the large mural vegetations to the systolic bruit heard over the base of the heart.

It is important to go through life in the possession of one's own teeth. Those who do so are in the minority because people generally do not pay enough attention to preventative dentistry.—N. Y. S. Dept. Health.

The American Public Health Association announces its sixty-second annual meeting, to be held in Indianapolis, Indiana, October 9-12, 1933.

At this session it is planned to honor the only living participant in the famous Yellow Fever Experiment, Dr. John R. Kissinger.

THE JOURNAL

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HEART DISEASE IN HYPER- THYROIDISM

Cardiac disturbances in hyperthyroidism have been recognized for a long time. Rosenblum and Levine* in reviewing sixty-nine cases of cardiovascular disease accompanying hyperthyroidism call attention to the tremendous progress that has been made in recent years in the treatment of these patients. There were fifty-one females and eighteen males with an average age of fifty and sevenths years. Reliable authorities comment on the gradual increase in hyperthyroidism occurring in males. In the group of cases reported the preoperative basal metabolism before the administration of Lugol's solution was plus 51.1 per cent while after operation the average metabolism of the entire series was plus 4.8 per cent. It is noteworthy that most of the patients studied had other forms of heart disease in addition to the cardiac disturbances caused by hyperthyroidism, as nineteen cases had rheumatic heart disease and thirty-five had hypertensive heart disease.

After operation no significant change occurred in blood pressure; however, the pulse pressure was reduced an average of fifteen to twenty mm. of mercury. No significant change occurred in the size of the heart following operation. Irregularity in rhythm was the most constant cardiac symptom as thirty-two of the sixty-nine cases reported had permanently established auricular fibrillation while twelve additional cases had transient attacks of auricular fibrillation. Attention is called to the fact that after operation most cases showing transient attacks of auricular fibrillation are completely relieved while in only a small percentage of cases with a permanently established auricular fibrillation is the arrhythmia relieved. The preoperative use of quinidin in cases of auricular fibrillation occurring in hyper-

thyroidism complicated by mitral stenosis is discouraged. Nine cases of angina pectoris complicating hyperthyroidism are reported. The clinical improvement that occurred in this group following operation was most striking. Also attention was called to the marked improvement after operation in cases with evidences of severe congestive heart failure.

Brief mention was made of the so-called "masked thyroid heart disease". In this condition the cardiac symptoms are the presenting symptoms of hyperthyroidism.

The authors conclude "The follow-up study of these cases showed that not only was there marked immediate improvement following operation in the various evidences of circulatory embarrassment such as congestive heart failure, angina pectoris and disturbing irregularities of the heart, but the improvement was extremely well maintained."

M. S. D.

The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.

MEDICAL ORGANIZATION

The promptness with which the members of the Medical Association of Georgia are paying their 1933 dues is particularly gratifying and shows their appreciation of the importance of maintaining an efficient organization. The total cost of membership, which includes membership in the American Medical Association and all the benefits of Medical Defense, is less than two cents per day. Georgia doctors are receiving more for the amount paid in dues to the Association than for a similar amount spent in any other way.

The time has come when it is necessary for all active practitioners of medicine to pull together for the maintenance of those principles which have characterized the profession since the beginning of time or else drowned separately in the mire of socialized and governmental medicine. The people of Georgia, we believe, realize fully the debt they owe to their efficient, well trained and loyal body of physicians and are willing and anxious that all the rights and privileges of the individual practitioner should be maintained. Georgia has no greater asset than this great body of worthy citizens.

*Rosenblum, Harold H.; Levine, Samuel A., What Happens Eventually to Patients With Hyperthyroidism and Significant Heart Disease Following Subtotal Thyroidectomy. Am. Jour. Med. Sci. Vol CLXXXV, No. 2; 219-233. Feb. 1933.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

HEALTH TENDENCIES IN GEORGIA IN THE LAST DECADE (1922-1932)

This year Georgia will celebrate her 200th bi-centennial anniversary. In the past two centuries mechanical science has been an important factor in the development of our rich natural resources, and has contributed many machines and devices to relieve the drudgery of labor, and give our people comforts. Georgia will proudly produce old records, yellow with age, to show the wonderful growth in wealth, agriculture, industry, education, transportation, etc., but there will be a dearth of old records to show the marvelous improvement made in health conditions through the contributions of medical science and public health measures.

The Bureau of Vital Statistics was organized in 1919, consequently, there are no birth and death records prior to that date. However, this occasion seems a fitting time to take stock of the health tendencies in the state in the last decade—the longest period of time for which reliable mortality statistics are available. By an examination of the accompanying table it will be seen that a whole series of epidemic and

parasitic diseases show pronounced declining mortality—typhoid fever, malaria, tuberculosis, and diphtheria. This is real progress but is offset to some extent by the continued increase in mortality from cancer and the degenerative diseases, like cerebral hemorrhage, heart disease and nephritis. These constitute the new health problem at this time, and it is imperative that more attention be given to the possibilities of bringing these diseases under control.

Now let us see what changes have occurred in the last ten years in the two classes of diseases—First, epidemic and parasitic diseases, which are generally recognized as amenable to public health measures; and, second, cancer and the degenerative diseases, which are not, in all probability, traceable to specific organisms. As this is written the death certificates for December have not been received by the Bureau of Vital Statistics so the rates are computed on an annual basis from the death records for the first eleven months of both years (1922 and 1932). In the first group of diseases there are listed 24 causes of death of which the death rates for 67 per cent show declines in the last decade. The death rates from typhoid fever, mala-

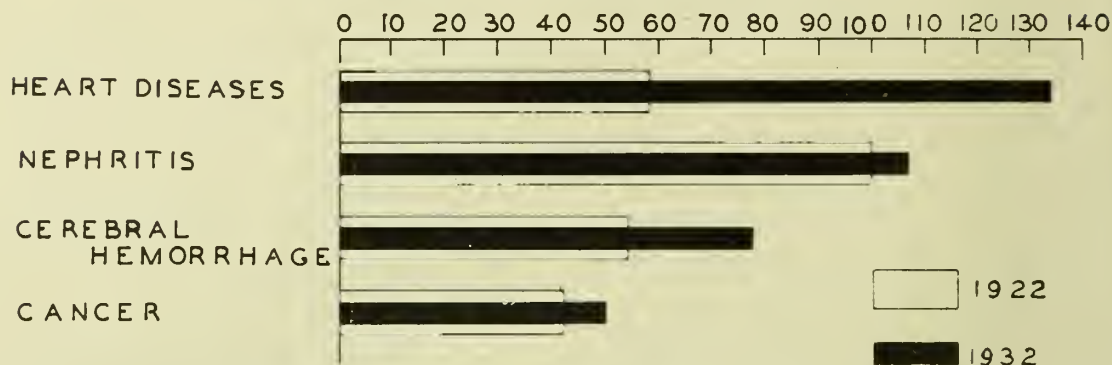
NUMBER OF DEATHS (JANUARY TO NOVEMBER INCLUSIVE), AND DEATH RATE (ANNUAL BASIS) PER 100,000 POPULATION, FROM SPECIFIED CAUSES OF DEATH, IN GEORGIA: 1922 AND 1932

CAUSE OF DEATH	Number of Deaths (Jan.-Nov.)		Death Rate Per 100,000 Population	
	1922	1932	1922	1932
ALL CAUSES	28,516	28,067	1075.0	1035.7
Epidemic and Parasitic Diseases (TOTAL)	6,272	4,179	236.4	154.2
Typhoid and Paratyphoid Fever	675	351	25.5	12.9
Typhus Fever	2	5	0.1	0.2
Malaria	564	287	21.2	10.6
Smallpox	21	1	0.8	0.0
Measles	5	12	0.2	0.4
Scarlet Fever	22	17	0.8	0.6
Whooping-cough	120	101	4.5	3.7
Diphtheria	343	130	12.9	4.8
Influenza	929	791	35.0	29.2
Cholera	2	—	0.1	—
Dysentery	380	135	14.3	5.0
Erysipelas	51	45	1.9	1.7
Acute Poliomyelitis	7	20	0.3	0.7
Lethargic Encephalitis	—	12	—	0.4
Meningococcus Meningitis	—	20	—	0.7
Anthrax	2	2	0.1	0.1
Rabies	7	3	0.3	0.1
Tetanus	65	28	2.4	1.0
Myocoses	1	6	0.0	0.2
Tuberculosis (all forms)	2,456	1,726	92.6	63.7
Syphilis	387	375	14.6	13.8
Gonococcus Infection	40	24	1.5	0.9
Purulent Infection, Septicemia	156	69	5.9	2.5
Other Infectious Diseases	37	19	1.4	0.7
Cancer and Degenerative Diseases (TOTAL)	6,744	9,971	254.2	368.0
Cancer	1,113	1,348	41.9	49.8
Cerebral Hemorrhage	1,427	2,103	53.8	77.6
Heart Diseases	1,545	3,618	58.2	133.5
Nephritis	2,659	2,902	100.2	107.1

CANCER AND DEGENERATIVE DISEASES

FIRST 11 MONTHS 1922 AND 1932

DEATHS PER 100 000 POPULATION



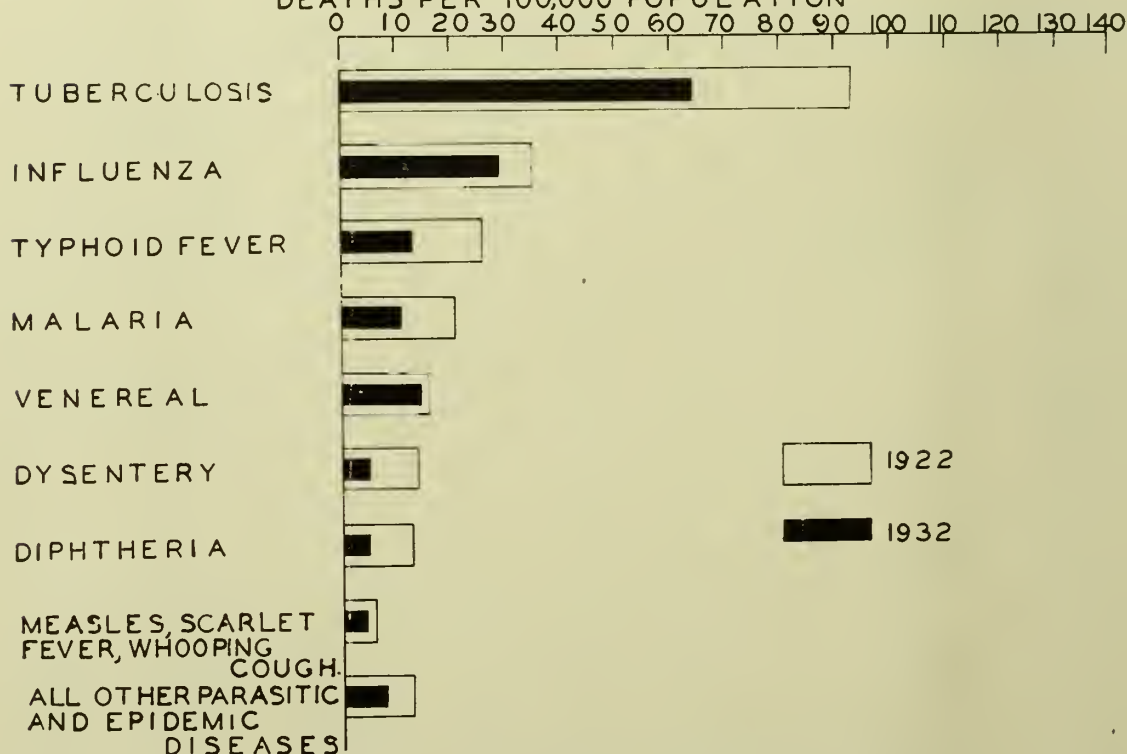
ria, and dysentery have been cut in half, and the rate from tuberculosis shows a reduction of 31 per cent. One can not even hazard a guess as to the mortality from tuberculosis in Georgia thirty years ago but the rate for the Registration Area in 1900 was 201 per 100,000 population. Today, Georgia's death rate from this disease is 64, just one-third as high as the rate

continues they will soon be of negligible concern to the medical profession and public agencies. These are splendid achievements to the credit of those responsible.

The last decade shows us another picture, where the tendency of deaths from certain diseases is growing worse. The first of these is cancer. The death rate

EPIDEMIC AND PARASITIC DISEASES

FIRST 11 MONTHS 1922 AND 1932
DEATHS PER 100,000 POPULATION



recorded in the Registration Area thirty years ago. The diseases of children, like scarlet fever, whooping-cough, and diphtheria have responded to preventive measures, and if the reduction made in the last ten years con-

from this disease in Georgia is now 19 per cent higher than it was ten years ago. This increase is due in part to the increasing average age of our population, and some to better diagnosis resulting in a more accu-

rate statement of cause of death, but aside from these factors cancer is now actually causing more deaths than a decade ago. Of equal concern is the steady increase in the degenerative diseases such as heart diseases, cerebral hemorrhage, and nephritis—of these the most serious is heart disease. The rate in the past decade shows an increase of 146 per cent. Perhaps some of this increase is also due to the aging of our population, and perhaps there are certain factors operating in today's civilization that are producing the breakdown of the heart and blood vessels.

The tendencies in the last ten years show that the gain in health and life conservation is confined principally to the younger ages, and that this gain is offset by an increase in the mortality from diseases peculiar to older people. But the fact that the mortality rate from all causes does not show an increase is an accurate index of what is being done in the state. The forces arrayed against want and disease have functioned well to prevent epidemics and increased mortality that are naturally expected with a lowered resistance in times of economic stress.

THE SIXTH DISTRICT MEDICAL SOCIETY MEETING

The winter meeting of the Sixth District Medical Society was held in Macon at Christ Church Parish House on December 7, 1932. After the invocation by Rev. Mortimer Glover, Dr. O. H. Weaver welcomed the visitors and Dr. A. H. Frye responded for the society. The scientific program was as follows:

1. Dehydration—Dr. C. Hall Farmer, Macon. Describing this condition as an anhydremia, Doctor Farmer emphasized its effect and importance, particularly in pediatrics. He also discussed means of combating it. Dr. O. H. Weaver discussed the relation of this condition to surgery; Doctor Richardson, methods of administering fluids, and Doctor Echols of Milledgeville, the relation of dehydration to mental disease.

2. Convulsions in Infancy and Childhood—Dr. W. C. Boswell, Macon. In this paper the causes of convulsions were classified and methods of treatment evaluated. Doctor Farmer discussed the role of latent tetany and its treatment. Dr. O. R. Thompson referred to latent tetany in pregnant women.

3. Eclampsia, Severe Hepatic Type with Recovery—Dr. O. R. Thompson, Macon. A detailed case report with methods of handling the cases was given. Doctor Richardson commended Doctor Thompson on the way in which the case was treated.

4. The Prevention of Deafness—Dr. J. Allen Smith, Macon. The prevalence of partial deafness and the importance of its recognition, especially in school children was emphasized.

5. Tinnitus Aurum—Dr. R. W. Richardson, Macon. In this paper a classification of the causes of this condition was given and the importance of recognizing and properly treating the cause was mentioned. The papers of Doctor Smith and Doctor Richardson were discussed by Dr. O. O. Watson, Doctor Echols

and Doctor Pennington. Doctor Pennington showed illustrative charts of audiometer tests.

6. Treatment of Irritative Lesions and Carcinoma of the Cervix—Dr. James A. Fountain, Macon. Characteristics of these lesions and methods of treating them were given in detail. In discussion, Dr. Thomas Harrold emphasized the importance of the use of the cautery and Doctor Richardson gave some points of technique of cauterization.

7. Diagnosis and Management of Diseases of the Biliary Tract—Dr. Charles H. Richardson, Macon. Both the medical and surgical aspects of this group of diseases were covered in this paper. Dr. Thomas Harrold referred to his disappointment in the limitation of x-ray in the diagnosis of gallbladder disease.

The last paper and demonstration was postponed until after the luncheon which was served in the dining room at the Christ Church Parish House.

8. Endoscopic Resection of the Obstructing Prostate—Drs. Bazemore, McMichael and Golsan, all of Macon. Doctor Bazemore read this paper in which he emphasized the limitations and necessity for proper selection of cases for this procedure as well as its advantages. Dr. Golsan then gave a very interesting motion picture demonstration using a film which he had made himself.

Business Session

The minutes of the previous meeting were read and adopted.

Dr. M. M. Head, President of the Medical Association of Georgia, discussed present state legislative problems of interest to organized medicine. He especially deplored the practice of medicine by the national and state governments. Other problems he mentioned were (1) the status of the department of public health; (2) contract practice; (3) legal protection of hospitals; (4) examination, licensing and liability insurance for automobile drivers; (5) increase in maximum allowance under industrial compensation law; and (6) state sterilization law.

Doctor Frye reported that the district councilor, Doctor Hunt, was prevented from attending the meeting on account of illness. A resolution was unanimously adopted that the secretary write him expressing the regrets of the society. A motion was also unanimously adopted that suitable resolutions be drawn and copies mailed to the bereaved families of Dr. E. R. Anthony of Griffin, and Dr. Herbert Respass, of Macon.

Officers for 1933 were elected as follows: President, Dr. Benjamin Bashinski, Macon. Vice-president, Dr. J. E. L. Johnson, Roberta. The term of the secretary-treasurer has not expired.

It being anticipated that the districts would be changed at the state meeting in May to conform to the new congressional districts, tentative arrangements were adopted for a summer meeting in Macon on Wednesday, June 28, 1933. Meeting adjourned.

H. C. ATKINSON, M.D.

Secretary-Treasurer.

Macon, Ga.

GEORGIA STATE NURSES ASSOCIATION

Officers

President—Miss Alice F. Stewart, R. N., Augusta.
 First Vice-President—Miss Dora A. Kershner, R. N., Macon.
 Second Vice-President—Miss Lillian Cumbee, R. N., Emory University.
 Secretary—Miss Myrtice Young, R. N., Augusta.
 Treasurer—Miss Jane Van De Vrede, R. N., Atlanta.
 Miss Jane Van De Vrede, R. N.
 Executive Secretary

District Presidents

First—Mrs. Dorothy Treacle, R. N., Savannah
 Second—Mrs. B. Y. Vann, R. N., Thomasville.
 Fourth—Miss Lucia Massee, R. N., Cuthbert.
 Fifth—Mrs. Sue B. Paille, R. N., Atlanta.
 Sixth—Mrs. Sarah P. English, R. N., Sandersville.
 Seventh—Miss Shirley Hamrick, R. N., Cedartown.
 Eighth—Miss Myrtle Jane Pinson, R. N., Athens.
 Ninth—Mrs. Laura P. Smith, R. N., Gainesville.
 Tenth—Mrs. Olive Barbin, R. N., Augusta.

Headquarters

131 Forrest Avenue, N. E., Atlanta.

DOES THE GRADUATE PAY
THE PRICE?

That the services of the graduate nurse are not being used to the extent they should be is being said more and more by nurses and physicians alike, according to Jane Van De Vrede, executive secretary of the Georgia State Nurses' Association.

"Letters coming to me from both physicians and nurses indicate failure of the graduate as compared to the practical attendant to secure employment, often in the face of the patient's extreme need for the very best nursing care, and in spite of the difficult economic situation prevailing among nurses during this trying period.

"Though physicians say that the graduates in their community are far better nurses, it is claimed undergraduates and practical attendants are securing greater consideration. In some instances, both doctors and nurses feel that the question is entirely an economic one, centering around rates for graduate service, which though thoroughly in keeping with the service rendered, have not been universally lowered since the economic depression.

"But there is apparently another angle to the matter—lack of supervision. That graduate nurses need supervision and are the losers because of this lack of supervision appears to be reflected in the failure of physicians to use graduate service generally".

Dr. Millard Tufts of Milwaukee, speaking before the Wisconsin State Nurses' Association recently, said he believed it would be possible for the medical profession to double the number of Registered Nurses used in homes today, with proper supervision. In offering friendly criticism Dr. Tufts said that outside of the hospital the physician often finds it difficult to obtain good nursing service among graduates. He said that it is not uncommon to learn of a physician treating hundreds of patients outside of the hospital without employing a single Registered Nurse.

Dr. Tufts does not blame the nurse, whom

he termed an institutional product—part of a system: but he says that she does not always adapt herself to the needs of the home—that she needs supervision. He compared the work of the nurse with that of the public school teacher, who could not do effective work without definite supervision and control, he contends.

"Nurses following their hospital training are sent out in new fields, to find themselves lacking not in the science but in the art and psychology of nursing," said Dr. Tufts. "No one aids them; there is no organized supervision". Proper and friendly advice are necessary to improve their condition, he believes.

This calls to mind the fact that formerly the physician himself supervised the service of the nurse. But in recent years has come, along with the hospital and the "school of nursing" a more formal type of nurse training. The doctor has relinquished to the school the supervision he formerly gave, and now he has every right to demand the type of nursing required by his patients.

Has the school failed in carrying out through its student personnel the elaborate procedures exacted of it by the hospital and the medical profession, to provide sufficient and proper supervision to make of nursing an art as well as a science? It would appear so.

That graduate service in hospitals will gradually take the place of student service, and that all institutions having to do with nursing will bend their energies toward a better prepared and better organized service under which graduates may work, seems imminent. The benefit to the patient is complete justification for such steps; yet the social and economic side of the question alone is challenging. The continued production of graduates in the face of today's nursing situation is a reflection on the nurse, the physician and the hospital; and the failure on the part of the medical profession to deal with the question is going to become increasingly embarrassing to both professions.

WOMAN'S AUXILIARY

OFFICERS

President—Mrs. S. T. R. Revell, Louisville.
 President-Elect—Mrs. J. Bonar White, Atlanta.
 First Vice-President—Mrs. N. Peterson, Tifton.
 Second Vice-President—Mrs. C. Thompson, Millen.
 Third Vice-President—Mrs. J. W. Simmons,
 Brunswick.

Recording Secretary—Mrs. J. E. Penland, Waycross.
 Corresponding Secretary—Mrs. F. B. Rawlings,
 Sandersville.
 Treasurer—Mrs. Chas. Usher, Savannah.
 Parliamentarian—Mrs. Charles Hinton, Macon.
 Editor—Mrs. C. W. Roberts, Atlanta.

FROM THE NEWS LETTER

December, 1932—January, 1933.

*Mrs. Milton P. Overholser, Chairman
 Press and Publicity*

Your chairman of Press and 'Publicity is most happy to open this News Letter with a concrete message from our national President, Mrs. James F. Percy.

GREETINGS FOR 1933

The old year is ended and the bright New Year full of possibilities for success and happiness is before us. And oh, such opportunities for Resolutions! Not the proverbial kind, forgotten so soon, but for growth, consolidation and coordination, thus stabilizing all phases of our activities, warm friendships mellowing the memories of past years and bringing our own year to such a close as will find us more firmly established than ever in the hearts and lives of those we serve.

The poet has sung—"Oh for a day in June" and what can be lovelier than Wisconsin in June! Already our thoughts are turning conventionward. This means reports, and it should not be too early NOW to think of what those reports will contain. In many cities, high school students are allowed to run the various parts of city government for a day. It would provide an awakening experience if some of our members could be national officers, at least for a day. Each state has its own definite interests and problems, and each officer, especially standing committee chairmen, earnestly tries to sympathetically understand and assist in their development.

In the last News Letter, Mrs. Freeman's splendid article emphasized the importance and value of Hygeia. Today let us turn to the importance of Public Relations. Every newspaper, as well as medical journals, has given headlines to the reports of the committee on "The Cost of Medical Care". Who more than the Auxiliaries should carefully read, discuss and understand both the majority and minority reports, and be thoroughly familiar with their arguments and claims.

In the Pennsylvania Medical Journal we read from the physicians themselves "A gradual extension of our Public Relations Activity is the only sane solution for meeting those who interfere with the evolutionary progress of medical science." This well expresses the spirit of the recommendations from the Committee on Public Relations through its chairman, Mrs. A. Haines Lippincott, and her committees which should be, and are, reaching to the individual members, for from the

Auxiliary columns of the medical journals of many states, we find it has become a vital note in our education, each a committee of one carrying with them into other organizations the facts in reference to scientific medicine that should be the common possession of every citizen.

Mrs. C. R. Phillips, in her report as retiring President of the Pennsylvania Auxiliary, emphasizes the recognized importance of the place for public health and educational subjects in their past years' programs, and that these same subjects have been given to other clubs and organizations by the public relation chairman, thus accomplishing a fine piece of work.

An enthusiastic letter from Mrs. B. Franklin Blotz, State President of Colorado, states she had just motored to Denver, a distance of 190 miles to attend the meeting of the State Public Relations Committee and a splendid outline for the year has been prepared.

We have asked this might be considered a State Year. Assurances have come from so many of the states, too numerous to mention for fear we might omit one, that again we urge each group of state officers to co-operate to the fullest with everyone of the National Chairman. Your success is our success. As you grow our influence multiplies and enables us all to accomplish the things we seem to have been born to do.

Instinctively we all know what we would like to accomplish in the coming year.

Let us do it with all our might!

Faithfully yours,

MRS. JAS. F. PERCY, *President,
 Woman's Auxiliary to A. M. A.*

NEWS ITEMS

Mrs. Horace J. Whitacre, 3803 North Monroe Street, Tacoma, Washington, has been elected national first Vice-President and ex-officio Chairman of Organization, filling the office left vacant by the advancement of Mrs. Percy to the presidency.

Says Mrs. Percy: "It is a great asset to the National Auxiliary to have Mrs. Whitacre become again a member of the National Board. She has given a remarkable demonstration of her executive ability in the organization of her own state Auxiliary and as its first president. She received merited recognition during the New Orleans convention. She brings to her new office charm, wisdom and a rich experience from which we shall reap the benefits."

May our doctors everywhere become sufficiently Auxiliary-minded to remember to take home both their state Medical Journals and their A. M. A. Bulletins.

The Woman's Auxiliary to the Tenth District Medical Society will meet in Augusta, February 22nd. Mrs. Jas. B. Dillard, Davisboro, District Manager, will preside.

JACKSON COUNTY MEDICAL SOCIETY MEETING AND ENTERTAINMENT

On Monday evening, January 9th, Dr. and Mrs. Myron B. Allen, of Hoschton, Ga., entertained at dinner the members of the Jackson County Medical Society, with members of the Barrow County Medical Society, Dr. M. F. Hagood, Superintendent of the State Tuberculosis Sanitarium at Alto; Dr. Horace E. Crow, of the State Tuberculosis Sanitarium at Alto; and Dr. Earl P. Laird, Emory University, Atlanta.

During the dinner a delightful program of music and dancing was rendered by Misses Virginia and Alberta Allen, daughters of Dr. Myron B. Allen; and Miss Lucy Allen, daughter of Dr. L. C. Allen, assisted by their teacher Mrs. J. W. Griffith and her little daughter, Jerry, of Winder, and Mr. Sam Freeman, young son of Dr. Ralph Freeman, of Hoschton.

After the dinner the regular business meeting of the Jackson County Medical Society was held in the Allen Clinic & Hospital, at which time the members of the Barrow County Medical Society joined the Jackson County Medical Society, forming what is to be known as the Jackson-Barrow Counties Medical Society.

After the business session Dr. Myron B. Allen gave a talk on "Artificial Pneumothorax in the Treatment of Pulmonary Tuberculosis," and demonstrated the method of procedure with two tubercular patients, the results then being shown by fluoroscopic examination. The paper was discussed by Drs. M. F. Haygood and Horace E. Crow, both of Alto, and Dr. L. C. Allen, Hoschton.

Those enjoying the hospitality of Dr. and Mrs. Myron B. Allen were Dr. and Mrs. L. C. Allen, Dr. and Mrs. Lloyd Lott, Mrs. Ralph Freeman, Mr. Sam Freeman, Miss Myrtice Allen, Miss Lucy Allen, Miss Jurelle Gilmore and Mrs. T. L. Adderholdt, of Hoschton; Drs. J. C. Bennett, E. M. McDonald, C. B. Lord, of Jefferson; Drs. Laetus Sanders, A. A. Rogers, F. M. Hubbard and Miss Ruth Sanders, of Commerce; Drs. W. T. Randolph, C. B. Almond, S. T. Ross, E. R. Harris, and R. P. Adams, and Mrs. J. W. Griffith and Miss Jerry Griffith, of Winder; Drs. M. F. Haygood and Horace E. Crow, Alto; and Dr. Earl P. Laird, Emory University.

The next meeting will be held at the Harrison Hotel, Jefferson, on the evening of February 6th.

An x-ray examination of the teeth to determine whether cavities are forming in hidden areas is the only safe way. X-ray takes the guess out of dentistry. N. Y. S. Dept. of Health.

MEETING OF THE SOUTHERN SURGICAL ASSOCIATION

The Southern Surgical Association met for its Forty-Fifth Annual Session, at the Roney Plaza Hotel, Miami, Fla., December 13-14-15. Notwithstanding the economic depression, the attendance was good, and the meeting was featured by the usual enthusiasm. The Roney Plaza is a most attractive hotel, situated on the Beach in beautiful surroundings. The weather was ideal, and boating, golfing, and surf-bathing were among the many attractions offered.

The meeting was presided over by its distinguished President, Dr. Robert S. Cathcart, Charleston, S. C., with Dr. Robert L. Payne, Norfolk, Va., Secretary. Tuesday morning there was first a symposium on "Urology" presented by Drs. George R. Livermore, Memphis, Tenn.; E. Dunbar Newell, Chattanooga, Tenn.; Wm. E. Lower, Cleveland, Ohio; R. C. Coffey, Portland, Oregon; Dr. Fred W. Rankin, Rochester, Minn., presented a paper entitled "Tumors of the Parathyroid"; and Dr. Alexius McGlannan, Baltimore, Md., "Peripheral Nerve Systems in Goiter".

Tuesday afternoon a golf tournament was held, followed by a tea-dance in the Patio, Roney Plaza Hotel. Those who did not enter the golf tournaments were treated to a most enjoyable boating trip or deep sea fishing.

Tuesday evening there was a symposium on "Surgery of the Gastro-Intestinal Tract" presented by Drs. Frank L. Barnes, Houston, Texas; Willis D. Gatch, Indianapolis, Ind.; Harvey B. Stone, Baltimore, Md.; Mont R. Reid, Cincinnati, Ohio; W. L. Estes, Bethlehem, Pa.; J. Knox Simpson, Jacksonville, Fla.; Alton Ochsner, New Orleans, La.; and William H. Martin, Chicago, Ill.

Wednesday morning was likewise donated to a scientific program, first a symposium on "Malignancy of the Breast" by Drs. John R. Moore, Houston, Texas; Burton J. Lee, New York City; and William Perrin Nicolson, Atlanta, Ga. Following this Dr. Vilray P. Blair, St. Louis, Mo., presented a splendid paper on "Release of Axillary and Brachial Scar Fixation." Then followed a paper by Dr. James M. Mason, Birmingham, Ala., "Traumatic Arterio Venous Aneurysm"; and one by Dr. A. O. Singleton, Galveston, Texas, "Wounds of the Heart".

The Association was fortunate in having present one of its most distinguished Honorary members, Dr. Rudolph Matas, who reviewed the entire subject of "Arterio-Venous Aneurysm".

The Wednesday afternoon session was given over to Orthopedic and Gynecological problems, the program being composed of papers by Drs. George A. Hendon, Louisville, Ky.; O. L. Miller, Charlotte, N. C.; Willis Campbell, Memphis, Tenn.; and F. Webb Griffith, Asheville, N. C.

Wednesday evening the Annual Banquet was held. Dr. Hubert A. Royster, Raleigh, N. C., was toastmaster and presided in his delightful and characteristic manner. The banquet was made unique by a "Presentation of a Sand Glass" by Dr. Louis Frank, Louisville, Ky. During the banquet there was a program

of entertainment followed by music and dancing for members of the Association and their guests. Following this, came the Presidential Address, "Surgery and its Relationship to Society" by Dr. Robert S. Cathcart.

Thursday morning the scientific program was composed first of a symposium on "Surgery of the Liver and Gallbladder" presented by Drs. Frank Boland, Atlanta, Ga.; K. H. Aynesworth, Waco, Texas; and H. B. Gessner, New Orleans, La. Dr. Walter E. Dandy, Baltimore, Md., then presented a paper, "Diagnosis and Treatment of Meniere's Disease"; Dr. Adrian S. Taylor, Birmingham, Ala., a paper on "Treatment of Trigeminal Neuralgia." The session was completed by a symposium on "Surgery of the Spleen," presented by Drs. H. R. Sands, Jackson, Miss.; and W. D. Wise, Baltimore, Md. The Thursday afternoon session included papers on various subjects, presented by Drs. Frank S. Johns, Richmond, Va.; Charles H. Mayo, Rochester, Minn.; Lloyd Noland, Birmingham, Ala.; George H. Bunch, Columbia, S. C.; J. M. T. Finney, Jr., Baltimore, Md.; and R. L. Rhodes, Augusta, Ga.

Officers elected for the ensuing year were Dr. Vilray P. Blair, St. Louis, Mo., President; Dr. Elmer H. Adkins, Miami, Fla., Vice-President; and Dr. Robert L. Payne, Norfolk, Va., Secretary.

Following the meeting which adjourned Thursday afternoon, some availed themselves of the opportunity to take a trip by plane to Havana, Cuba.

The Association is indebted to Dr. Elmer H. Adkins, Miami, Florida, Chairman of the Committee on Entertainment, who was untiring in his efforts.

Atlanta Lon W. Grove, M.D.

COUNTIES REPORTING FOR 1933

Henry County Medical Society

The Henry County Medical Society announces the following officers for 1933:

President—Tye, R. L., McDonough.
Vice-President—Crawford, R. L., Locust Grove.
Secretary-Treasurer—Ellis, H. C., McDonough.
Delegate—Colvin, E. G., Locust Grove.
Alternate Delegate—Smith, J. G., McDonough.

Madison County Medical Society

The Madison County Medical Society announces the following officers for 1933:

President—Banister, H. G., Ila.
Vice-President—Bryant, C. H., Comer.
Secretary-Treasurer—Gholston, W. D., Danielsville.
Delegate—Bryant, C. H., Comer.
Alternate Delegate—Banister, H. G., Ila.
Censors—Gholston, W. D., Kelley, G. W. and Bryant, C. H.

Washington County Medical Society

The Washington County Medical Society announces the following officers for 1933:

President—Rogers, O. L., Sandersville.
Vice-President—Taylor, R. L., Davisboro.
Secretary-Treasurer—Cason, W. M., Sandersville.
Delegate—Peacock, E. S., Harrison.
Alternate Delegate—Burdette, J. R., Tennille.

Censors—Malone, S. B., Vickers, T. E., and Dillard, J. B.

Telfair County Medical Society

The Telfair County Medical Society announces the following officers for 1933:

President—Neal, J. W., Scotland.
Vice-President—Youmans, C. R., Lumber City.
Secretary-Treasurer—Maloy, C. J., Helena.
Delegate—Mann, F. R., McRae.
Alternate Delegate—Collum, O. F., McRae.

Emanuel County Medical Society

The Emanuel County Medical Society announces the following officers for 1933:

President—Lucas, W. H., Stillmore.
Vice-President—Chandler, J. H., Swainsboro.
Secretary-Treasurer—Franklin, R. C., Swainsboro.
Delegate—Chandler, J. H., Swainsboro.
Alternate Delegate—Lucas, W. H., Stillmore.
Censors—Franklin, V. E., Franklin, R. C. and Smith, D. D.

Clarke County Medical Society

The Clarke County Medical Society announces the following officers for 1933:

President—Holliday, A. C., Athens.
Vice-President—Davis, J. W., Athens.
Secretary-Treasurer—Harris, H. B., Athens.
Delegate—Cabaniss, W. H., Athens.
Alternate Delegate—Hubert, M. A., Athens.

Muscogee County Medical Society

The Muscogee County Medical Society announces the following officers for 1933:

President—McDuffie, J. H., Jr., Columbus.
Vice-President—Threatte, Bruce, Columbus.
Sec'y.-Treas.—Thompson, J. B., Columbus.

Laurens County Medical Society

The Laurens County Medical Society announces the following officers for 1933:

President—Thompson, Wm. C., Dublin.
Vice-President—Barton, Jno. J., Dublin.
Secretary-Treasurer—Hicks, Chas. L., Dublin.
Delegate—Coleman, A. T., Dublin.
Alternate Delegate—Claxton, E. B., Dublin.

Walton County Medical Society

The Walton County Medical Society announces the following officers for 1933:

President—Day, J. B. H., Social Circle.
Sec'y.-Treas.—Lott, W. H., Monroe.
Delegate—Pirkle, J. A., Monroe.
Alt. Delegate—Aycok, T. R., Monroe.

Hall County Medical Society

The Hall County Medical Society announces the following officers for 1933:

President—Cheek, Pratt, Gainesville.
Vice-President—Meeks, W. T., Gainesville.
Sec'y.-Treas.—Garner, W. R., Gainesville.
Delegate—Whelchel, C. D., Gainesville.
Alt. Delegate—Wellborn, C. J., Gainesville.
Censors—Meeks, J. L., Whelchel, C. D., and Garner, W. R.

COMMUNICATIONS

History of the Fulton County Medical Society
To The Editor:

In Dr. Goldsmith's History of the Fulton County Medical Society in last month's issue of the Journal, he states that Dr. Bates Block was president in 1907.

That is an error to which I directed his attention some time ago. I have heard nothing from him in reply to my note, so I ask you to be good enough to correct it.

I was president in 1904, in 1907, and in 1908.

A. W. STIRLING, M.D.

Atlanta, Ga., Jan. 23, 1933.

CHIROPRACTORS AND CLASS "A" SCHOOLS

To The Editor:

There is being widely distributed an announcement of the Illinois College of Physicians and Surgeons, 20 North Ashland Boulevard, Chicago, which includes the following statement:

"Courses offered and requirements for graduation are class 'A' requirements."

Inasmuch as the Council on Medical Education and Hospitals of the American Medical Association is the only body which has ever rated medical schools as class A, it is clearly implied that the above named school conforms to the standards prescribed by this Council. Such an inference, however, is wholly unwarranted. The above institution is conducted by a group of chiropractors and does not even remotely approach the standards of a class A medical school.

You are apprized of these facts in order that you may not unwittingly employ as interns any of the graduates of this school.

WILLIAM D. CUTTER, M.D.

*Secretary of the Council on Medical
Education and Hospitals, A. M. A.*

Chicago, Ill.

NEWS ITEMS

The Georgia Medical Society, Savannah, held its regular meeting on January 24th. Dr. S. F. Rosen, Savannah, read a paper entitled "Paroxysmal Hemoglobinuria"; discussion led by Dr. M. J. Epting and Dr. Lee Howard, both of Savannah. Dr. J. C. Metts, Savannah, gave a case report, "Papilloma of the Bronchus with Bronchoscopic Removal."

The Jackson County Medical Society and the Barrow County Medical Society have merged and in the future will be known as the "Jackson-Barrow Medical Society."

Dr. and Mrs. M. B. Allen, Hoschton, entertained the members of the Jackson County Medical Society and the Barrow County Medical Society on January 14th. The business meeting of the Society was held at the Allen Clinic and Hospital, Hoschton. Dr. M. B. Allen read a paper entitled "Artificial Pneumothorax" which was discussed by Dr. M. F. Haygood and Dr. H. E. Crow, both of Alto.

The annual meeting of the Staff of the Crawford W. Long Memorial Hospital, Atlanta, was held on January 12th. Dr. L. C. Fischer, Atlanta, discussed "Appendicitis" and illustrated his remarks by picture slides. Others present joined in the discussion. Officers elected for the ensuing year were: Dr. Thos. P. Goodwyn, president; Dr. Harold P. McDonald, vice-president; Dr. Chas. E. Lawrence, secretary. Dr. Allen H. Bunce, secretary of the Board of Trustees, made an annual report which showed that all funds received were being used in the institution with the idea of increasing efficiency and service.

Dr. W. Frank Wells, Atlanta, has been re-elected chairman of the Fulton County Board of Health; Dr. W. N. Adkins, Atlanta, Health Officer. The annual report by Dr. Adkins for the activities of his office during 1932 were as follows: 15,648 investigations, 5,145 nuisances abated, 1037 pre-school examinations, 3,306 visits by nurses, together with many other activities and quarantine ordinances.

The Chattahoochee Valley Free Clinic, West Point, reports charity work for December as follows: 161 patients treated, 21 dressings applied, 1 tonsillectomy, 1 minor operation, 24 teeth extracted, and 3 treatments for other diseases.

Dr. and Mrs. E. H. Lamb, Cornelia, entertained the members of the Habersham County Medical Society in their home on January 12th.

E. R. Squibb & Sons, New York City, on January 8th, began a series of radio programs in keeping with the traditions of its founder. One-half hour of entertainment has been on the air every Sunday over the Red Net Work of the National Broadcasting Company's Chain, at 4:30 P.M., New York City time. It features Frank Black and his orchestra, the Revelers, dramatization of the history of medicine. The presentation of music and interesting dramatic episodes have been designed to appeal to almost every type of radio listener. The announcements have emphasized that only through a sufficient number of properly trained physicians can a community expect to meet its responsibility for the care and prevention of illness and the protection of health.

The Richmond County Medical Society met at Augusta, on January 19th. Dr. Wm. A. Ellison, Perry Point, Maryland, read a paper entitled "The Medical Aspects of Brain Tumors"; Dr. Chas. W. Crane, Augusta, "Some Surgical Aspects of Intracranial Tumors." Dr. Wm. R. Houston and Dr. Ralph H. Chaney, both of Augusta, led the discussion.

The Randolph County Medical Society met at Cuthbert on February 2nd. Dr. E. C. McCurdy, Shellman, read a paper entitled "The Importance of the County Medical Society Now." Other members gave case reports.

The Staff meeting of St. Joseph's Infirmary, Atlanta, was held on January 24th. Officers were elected for 1933.

The Telfair County Medical Society met at the office of Dr. C. J. Maloy, Helena, on January 17th. Officers were elected for the ensuing year. The next meeting of the society will be held at McRae on March 14th.

The Fulton County Medical Society held its anniversary meeting and banquet at the Druid Hills Golf Club on January 5th. Dr. Chas. E. Boynton, Atlanta, was toastmaster. The entertainment consisted of music by an orchestra, impersonations, and slight of hand tricks. Dr. Ellis A. Fuller, pastor of the First Baptist church, spoke on "The Similarity of the Ministry and Medicine." Dr. Allen H. Bunce, Atlanta, chairman of Awards for the (Dr.) L. C. Fischer prizes, announced at the regular meeting of the Fulton County Medical Society on January 5th that the following prizes for 1932 would be awarded as follows: Dr. R. A. Bartholomew and Dr. R. R. Kracke, both of Atlanta, prize of \$100 for the best original work on "The Relation of Placental Infarcts to Eclamptic Toxemia—A Clinical, Pathological and Experimental Study"; prize of \$100 to Dr. L. Minor Blackford and Dr. Tom F. Davenport, both of Atlanta, for the best paper, entitled "Right Aortic Arch—Clinical Report of a Case with Associated Anomalies." Officers were installed for 1933 and committees appointed.

Dr. B. V. Elmore, Rome, Floyd County Commissioner of Health, was highly commended by the U. S. Assistant Secretary of Commerce, in a recent radio address broadcast from Washington. Doctor Elmore gave three inoculations of antityphoid serum to 15,357 people and immunized 1,195 children against diphtheria in 1932.

Dr. Geo. E. Atwood, Waycross, Ware County Commissioner of Health announces that in five years infant mortality has been reduced in Ware County from 137 to 48 per thousand infants under one year of age.

Mrs. F. M. Bullard, Savannah, presented to the Georgia Historical Society, a portrait of Dr. Richard D. Arnold, 1808-1876. The painting was by Miss Emma C. Wilkins, Savannah. Doctor Arnold was born in Savannah and resided there during his life. He gained recognition as a physician with advanced ideas and served one term as vice-president of the American Medical Association, six terms as Mayor of Savannah. Doctor Arnold was a leading delegate in the Constitutional Convention when Georgia seceded from the union.

Dr. R. H. Fike, Atlanta, delivered an address before the Rotary Club at Rome, January 26th, on "Malignant Growths."

Dr. C. L. Ridley, Macon, was elected chairman of the Medical Staff of the Macon Hospital on January 24th. Dr. I. H. Adams, Macon, vice-chairman.

Dr. J. D. Applewhite, Macon, Bibb County Commissioner of Health and City Health Officer for Macon, made his annual report for health work during 1932 on January 25th. The statement showed that the greatest amount of work in the history of the department had been done last year with less funds than used in former years. The figures showed a decrease in infant mortality, deaths due to typhoid fever, tuberculosis and pellagra.

Dr. Grant E. Ward, Baltimore, mailed invitations to friends in Georgia to attend a dinner to Dr. Howard Atwood Kelly, Baltimore, tendered by his friends on his seventy-fifth birthday, February 20th at the Lord Baltimore Hotel.

The Twenty-Ninth Annual Congress on Medical Education and Licensure was held at the Palmer House, State and Monroe Streets, Chicago, on February 13th and 14th. The Congress is held under the auspices of the Council on Medical Education and Hospitals of the American Medical Association.

The Emanuel County Medical Society met at Swainsboro on February 1st. Officers were elected for 1933.

The Clarke County Medical Society met at the Georgian Hotel, Athens, on January 13th. Officers were elected for the ensuing year.

Dr. S. C. Rutland, LaGrange, has been re-elected Troup County Commissioner of Health.

The Floyd County Medical Society met at the Forrest Hotel, Rome, on January 20th. Dr. C. W. Roberts, Atlanta, was a guest and speaker.

The Terrell County Medical Society met at the office of Dr. Lucius Lamar, Dawson, on January 27th. A resolution was adopted and a committee appointed to write articles on public health each week for publication in The Dawson News. Dr. E. C. McCurdy, Shellman, will deliver an address at the next meeting of the Society on February 24th.

The Brooks County Board of Health announces that prenatal clinics will be held at a number of places in the near future. Dates and places will be published.

Dr. R. R. Bridges, formerly of Leary, has moved to Lumpkin and opened an office for the practice of medicine.

Dr. W. C. Humphries, Griffin, Spalding County Commissioner of Health, filed his annual report with the Board of Health. He states that there were only

seven cases of typhoid fever during the year 1932 in Spalding county as compared with 35 in 1931 and 76 in 1927; 10 cases of diphtheria in 1932, against 18 cases in 1931; 9 deaths from tuberculosis, and 24 deaths of children under one year of age.

The Clinical Society of the Piedmont Hospital, Atlanta, met on February 13th. Case reports were as follows: "Intestinal Hemorrhage" by Dr. Floyd McRae, Atlanta; "Fracture Neck of Femur—Open Reduction, Internal Fixation by Smith-Peterson Nail", Dr. Lawson Thornton, Atlanta.

The Crawford W. Long Memorial Hospital and Clinic, Atlanta, announces the appointment of committee chairmen as follows: "Surgical", Dr. Frank K. Boland; "Record", Dr. Mark S. Dougherty; "Curriculum", Dr. Jno. B. Fitts; "Standardization", Dr. Ed. H. Greene; "Nursing", Dr. Shelley C. Davis; "Autopsy", Dr. A. J. Ayers; "Program", Dr. J. H. Nicholson; "Pathological", Dr. Allen H. Bunce; "Intern", Dr. W. M. Dunn; "X-Ray", Dr. W. F. Lake; "Entertainment", Dr. Archibald Smith.

The Laurens County Medical Society held a business meeting on the Wieuca House Boat of Dr. O. H. Cheek, Dublin, on the Oconee River, February 9th. Supper was served. Dr. O. H. Cheek and Dr. Chas. L. Hicks, both of Dublin, president and secretary of the society, respectively, were hosts. The following resolution was passed: "We, the members of the Laurens County Medical Society, endorse the health work as it is done today by the health department of Laurens County, Georgia, and warn the public of the danger of minimizing the efficiency of the health department by the curtailment of expenditures at the expense of human life."

The Georgia Hospital Association held its quarterly meeting at the Georgia Baptist Hospital, Atlanta, on January 27th. Miss Jessie M. Candlish, Superintendent of the Eggleston Memorial Hospital, Atlanta, read a paper entitled "Hospital Administration". The article was discussed by Dr. W. W. Jarrell, Thomasville; Dr. Russell H. Oppenheimer, Emory University; Dr. Grady N. Coker, Canton; and Dr. J. H. Hines, Atlanta. Miss Lillian Bischoff, Assistant Superintendent of Nurses at Grady Hospital, Atlanta, read a paper on "Nursing", which was discussed by Dr. Jarrell and Dr. Oppenheimer. The members in attendance were guests of the hospital at dinner. The next meeting of the association will be held at the Eggleston Memorial Hospital, Atlanta.

Dr. Albert Fleming and Dr. A. D. Williams, Folkston, entertained the members of the Ware County Medical Society at a shad supper on February 1st. Dr. A. C. Dorminy, Hoboken, with his orchestra from Brantley county rendered a musical program. The meeting was entirely social.

Dr. and Mrs. S. T. R. Revell, Louisville, entertained the members of the Jefferson County Medical Society and Woman's Auxiliary at their home on February 3rd.

The Eighth District Medical Society met at St. Mary's Hospital, Athens on February 8th. The following titles of papers were on the scientific program: "Tonsillectomy", Dr. W. C. McGeary, Madison; "Electrocardiography", Dr. G. O. Whelchel, Athens; "Hydronephrosis in a Child—Case Report", Dr. M. A. Hubert, Athens; "Enlarged Thyroids in Adults", Dr. J. W. Davis, Athens; "Pernicious Anemia—Case Report", Dr. Paul L. Holliday, Athens; "Gastric Diagnosis—Case Report", Dr. H. W. Birdsong, Athens; "Meningitis from Otitis", Dr. W. H. Cabaniss, Athens; "Frontal Sinusitis", Dr. J. H. Campbell, Athens; "Training in Obstetrics", Dr. Jno. A. Hunnicutt, Athens. Other members of the society gave case reports. Luncheon was served at the Holman Hotel.

Dr. Steve P. Kenyon, Dawson, delivered an address by special invitation before the Woman's Club at Dawson on February 1st. He spoke on the "Progress of Health in the State of Georgia in the Last Two Hundred Years". Dr. Kenyon emphasized particularly the progress in preventative medicine during two centuries.

The Board of Sanitary Commissioners, Savannah, refused to recommend to the City Council that soft drink dispensers use sterilized glasses instead of paper cups for serving drinks.

Dr. W. R. Golsan, Jr., Macon, spoke on the "Value of Films in the Study of Medicine" before a meeting of the Woman's Auxiliary to the Macon Medical Society held at the home of Mrs. D. D. Walker, Macon, on February 3rd.

Dr. T. H. Chesnutt, Moultrie, Colquitt County Commissioner of Health, reports that a very small per cent of examinations made in the county recently while conducting "Chest Clinics", showed positive findings.

Dr. H. C. Schenck, Alto, addressed the members of the Lions Club at Waycross, January 30th, on "Tuberculosis".

The Staff of the Ware County Hospital, Waycross, gave clinics on the following subjects at the institution on February 14th; Urological which included "Routine Examination of Patients" and "Differentiation of the Therapeutic Value of Bismuth and Arsenic in the Treatment of Syphilis". Surgical, "Operation for Cleft Palate", "Report of Unusual Injuries Found on Autopsy from Automobile Accidents", "Showing Roger Anderson Apparatus and Technic in the Treatment of Fractures of the Femur—Illustrated"; Medical,

Presentation—Case of Rickets", "Theraupeutic Value of X-Ray Treatment in Malignancies—Exhibition of Cases", "Slides Showing Vincent's Spirochete", "Vincent's Infection—Discussion of Cases Involving Intestinal Tract and Lung Tissue"; Eye, Ear, Nose and Throat, "Muscle Operation for Divergent Squint", "Needling Operation for Secondary Cataract", "Congenital Cataract—Case with Treatment". Visiting physicians were entertained at the Ware Hotel at dinner.

The Georgia Medical Society (Chatham County) met on February 14th. Dr. Julian K. Quattlebaum, Savannah, read a paper entitled "Mixed Tumors of the Parotid Region"; discussed by Dr. E. J. Whelan and Dr. M. J. Epting, both of Savannah. Dr. Jabez Jones, Savannah, read a paper entitled "Free Intra-peritoneal Tumor".

The Atlanta Tuberculosis Association held its annual meeting at 282 Forrest Avenue, N.E., Atlanta, on February 16th. Dr. M. F. Haygood, Alto, Superintendent of the State Tuberculosis Sanatorium, was a guest speaker.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on February 16th. The following titles were on the scientific program: "Fibroid Tumor, Anterior Vaginal Wall—Case Report", Dr. J. A. Combs, Atlanta; "Influenza, Its Complications and Treatment", Dr. O. O. Fanning, Atlanta; "Common Duct Obstruction—Case Reports", Dr. J. C. Read and Dr. Lon W. Grove, both of Atlanta. The papers were discussed by Dr. Floyd McRae, Dr. Jas. E. Paullin and Dr. D. Henry Poer, all of Atlanta.

Dr. N. M. Owensby, Atlanta, has been appointed a member of the Committee on the Activities of the Neuropsychiatry Division of the U. S. Veterans' Bureau.

Dr. and Mrs. Phinzy Calhoun, Atlanta, entertained Dr. and Mrs. Morris Fishbein of Chicago, during their visit in Atlanta, February 8th to 11th.

The Walton County Medical Society met at the Walton County Hospital, Monroe, on February 7th. Motion carried to extend an invitation to the officers of the Division of County Health Work of the Department of Public Health to visit Walton county with the Healthmobile and conduct tuberculosis clinics for the school children. A resolution was passed to endorse the bill before the General Assembly of Georgia to reorganize the State Board of Health and the amendment to the Workmen's Compensation Act, also to convey copies of the resolution to the representatives in the legislature from Walton county. Officers were elected for 1933. The members were entertained at dinner by the management of the hospital.

The Atlanta Chapter of the Emory University Alumni Association held its Tenth Annual Charter

Day Dinner at the Atlanta-Biltmore Hotel, Atlanta, on January 25th. Mr. Lauren Foreman, President, presided. Hon. Hugh Howell, Atlanta, Chairman of the State Democratic Executive Committee, delivered an address, entitled "The Piece-Time Soldier". A feature of the evening was a radio program over station WSB to other alumni clubs in the United States. Dr. Harvey W. Cox, President of Emory University, introduced Mr. Charles Howard Candler, President of the Board of Trustees, who gave a message of greeting to all the alumni of Emory University. Dr. Allen H. Bunce, Atlanta, President of the Emory University Alumni Association, responded for the alumni. Officers elected were Dr. Marion T. Benson, President; Mr. Thomas W. Moore, Vice-President; Mr. Chas. D. Hurt, Jr., Secretary; Mr. Francis Spears, Treasurer; Representatives to the Council of the Alumni Association are: Dr. C. C. Aven, Mr. Ward Wight, Mr. Francis L. Edmondson, Rev. W. T. Watkins and Mr. Henry Miller.

The Jackson-Barrow Medical Society met at the Harrison Hotel, Jefferson, on February 6th. Dr. Paul T. Scoggins, Commerce, read a paper entitled "Drugs". The next meeting will be held at Jefferson on March 6th.

The Glynn County Medical Society met at the City Hospital, Brunswick, on February 8th. Dinner was served in the Nurses' Dining Room.

OBITUARY

Dr. James Murray Cook, Sardis; member; Emory University School of Medicine, Emory University, 1915; aged 46; died at a private hospital, Augusta, on January 2, 1933. He was born and reared at Ellaville and began the practice of medicine in Charing. Doctor Cook moved to Sardis more than twelve years ago. He was generous and sympathetic which accounts in part for the love and adoration by the people of Burke and adjacent counties. He was a member of the Burke County Medical Society and the Baptist church. Surviving him are his widow and three sons, J. R., Harold and Chas. M. Cook. Funeral services were conducted by Rev. Marshall, Pastor of the Baptist church at Louisville, from the Ellaville Methodist church. Interment was in Ellaville cemetery.

Dr. J. M. Gregory, Macon; Atlanta School of Medicine, Atlanta, 1893; aged 70; died at his home, 518 Pine Street, after an illness of several weeks' duration. He was a native of Mississippi. Doctor Gregory received his high school education at Georgetown, Texas. He practiced medicine at Adel for twenty-six years, moved to Montezuma and practiced there for a number of years, and in 1930 retired and moved to Macon. He was an amiable gentleman and held in high esteem by many friends. Doctor Gregory was a member of the Adel Masonic lodge and the Methodist church. Surviving him are his widow, one daughter, Mrs.

W. B. Reeves, Albany; two sons, M. H. Gregory, Macon; M. T. Gregory, Atlanta. Rev. J. A. Harmon conducted the funeral services from Hart's mortuary. Interment was in Riverside cemetery.

Dr. Jesse Bowers McAfee, Dalton; Atlanta School of Medicine, Atlanta, 1912; aged 46; died of pneumonia at a private hospital in Atlanta on January 17, 1933. He practiced medicine in Dallas, Texas, for a few years after graduating in medicine, later practiced in Atlanta and Dalton. At the time of his death, he was physician for the Whittier Mills, Bolton. Doctor McAfee was successful in his work and untiring in his efforts to benefit patients he attended. He was an adorable gentleman and held in high esteem by many acquaintances. Surviving him are his widow, two daughters, Misses Genevieve and Annelle McAfee; his parents, Dr. and Mrs. J. G. McAfee, Dalton; one brother, Phil McAfee, Johnson City, Tenn.; two sisters, Mrs. C. D. Meadows, Elizabethton, Tenn., and Mrs. Wm. K. Hall, Houston, Texas. Funeral services were conducted by Rev. T. P. Tribble and Rev. Harold Shields from the chapel of Brandon, Bond & Condon Co., Atlanta. Burial was in West View cemetery.

Dr. Theodore Gourdin Kershaw, Augusta; member; Medical College of the State of South Carolina, Charleston. 1904; aged 49; died at Asheville, N. C., January 27, 1933. He was born at Beaufort, S. C. After graduating in medicine, he practiced at Yonge's Island and Walterboro before going to Augusta where he practiced for more than twenty years. Dr. Kershaw limited his practice to tuberculosis. He was an estimable citizen and had many friends. Dr. Kershaw was a member of the Richmond County Medical Society and the American Medical Association. Surviving him are his widow, three sons, Lieutenant Theo. G. Kershaw, Jr., United States Army Air Service at Honolulu; John Kershaw, New York City; P. G. Kershaw, Spruce Pine, N. C.; one daughter, Miss Marion Kershaw, North Augusta, S. C. Funeral services were conducted at Asheville, N. C., the body cremated and the ashes scattered over the grave of his first wife at Charleston, S. C.

Dr. John N. Kennington, Danville; Atlanta College of Physicians and Surgeons, Atlanta, 1903; aged 64; died at the home of his sister, Mrs. W. G. Kitchens, on January 28, 1933. He was born and reared in Twiggs County. Dr. Kennington had practiced medicine in Twiggs and adjoining counties for more than a quarter of a century. He was held in high esteem and had many friends. He was a member of the Masonic lodge and the Baptist church. Surviving him are two brothers, H. F. Kennington, Macon; H. S. Kennington, California; five sisters, Mrs. H. G. Adkins, Macon; Mrs. R. A. Finney, Cochran; Mrs. Will Smith, Eastman; Mrs. W. G. Kitchens, Dry Branch, and Mrs. Annie Osborne, California. Funeral services were conducted from Antioch church by Rev. J. C. Solomon. Burial was in the church cemetery.

Dr. Cornelius Edward Ware, Atlanta; Atlanta College of Physicians and Surgeons, Atlanta, 1912; aged 43; died at the home of his mother-in-law in Center Hill of pneumonia on February 2, 1933. After graduating in medicine, he spent two years at the Brooklyn Eye, Ear, Nose & Throat Hospital, Brooklyn, N. Y., doing postgraduate study and work. For more than a decade he has limited his practice to diseases of the eye, ear, nose and throat. Doctor Ware was a prominent and valuable citizen. He took an active interest in fraternal and religious organizations. Dr. Ware was a member of the Shrine, Yaarab Patrol, and the First Methodist church. Surviving him are his widow, one son, C. E. Ware, Jr., and one brother, Dr. M. J. Ware, Griffin. Funeral services were conducted from the chapel of Brandon, Bond & Condon Co., by Dr. Samuel T. Senter. Interment was in West View cemetery.

DR. JAMES WIMBERLY PATTERSON

Dr. James Wimberly Patterson was born in Randolph County, Georgia, January 26, 1863, and died in Dawson, Georgia, December 7, 1932. In early life, Dr. Patterson's parents moved to Stewart County; here he grew up, attending the common schools of that day, later the military college at Cuthbert. His medical education was secured at Vanderbilt, where he graduated in 1884. He practiced first in Randolph County, later moving to Lumpkin in Stewart County. In 1887 he was married to Miss Mattie Bell of Dawson who preceded him in death ten years. To Dr. and Mrs. Patterson were born six children, Mrs. L. M. Norton, Dawson; Mrs. W. A. Howard, Washington, D. C.; Rev. J. W. Patterson, Odum; Homer S. Patterson, Columbia, S. C.; and Chas. E. Patterson, Washington, D. C. In 1902 Doctor Patterson moved to Dawson where he remained until his death. The Gods were most kind to Doctor Patterson in the distribution of their gifts. In personal appearance he was very distinguished, being the dark, handsome, striking type. The stranger would always turn and look back at Doctor Patterson. In temperament he was genial and kind—few people made friends more readily. He always had a pleasant word or joke to pass as he met you. In manners he was a Chesterfield—always the courteous "southern gentleman." He was possessed of a brilliant intellect, quick at repartee and had an attractive personality. His was a generous nature and he gave his services freely, not only to his friends, but to any who might need them. He loved people and always put a kindly construction on their motives. We all loved and will miss Doctor Patterson from our midst.

To his children and his other relatives we extend our sympathy with the assurance we will ever keep a green spot to the memory of our friend and co-worker.

Be It Resolved: That these resolutions be spread upon our minutes, published in the Journal of the

Medical Association of Georgia, and a copy be furnished the family.

LUCIUS LAMAR, M.D.

J. G. DEAN, M.D.

J. H. LEWIS, M.D.

Committee, Terrell County Medical Association.

BOOKS RECEIVED

The History of Dermatology by Wm. Allen Pusey, M.D., Professor of Dermatology Emeritus, University of Illinois; Sometime President of the American Dermatological Association and of the American Medical Association. Contains 223 pages with illustrations. Publisher; Charles C. Thomas, 300 East Monroe Street, Springfield, Illinois. Price \$3.00.

Office Surgery by Fenwick Beekman, M.D., Visiting Surgery, Bellevue Hospital; Visiting Surgeon, Hospital for the Ruptured and Crippled; Consulting Surgeon, Lincoln Hospital; Clinical Professor of Surgery, New York University and Bellevue Medical School. Contains 402 pages with 94 illustrations. Publishers; J. B. Lippincott Co., Philadelphia.

Medical Clinics of North America. (Issued serially (Boston Number—January 1933) one number every other month.) Volume 16, No. 4. (Boston Number—January 1933). Octavo of 256 pages with 33 illustrations. Per Clinic Year July 1932 to May 1933. Paper, \$12.00; Cloth, \$16.00 net. Publishers; W. B. Saunders Co., Philadelphia.

Diseases of the Blood by A. Piney, M.D., Fellow of the Royal Microscopical Society; Member Correspondent de l'Académie de Médecine de Paris; Director of the Pathological Department, The Cancer Hospital (Free), London; Consulting Physician, Chelmsford and Essex Hospital; Late Director of the Institute of Pathology, Charing Cross Hospital, London; Sometime Lecturer in Pathological Histology in the University of Birmingham; and Arris and Gale Lecturer of the College of Surgeons of England. Second Edition. Contains 310 pages with 65 illustrations, 14 in color. Publishers: P. Blakiston's Son & Company, Inc., 1012 Walnut Street, Philadelphia. Price \$4.00.

MEAD'S 10 D COD LIVER OIL is made from Newfoundland oil

Professors Drummond and Hilditch have recently confirmed that for high vitamins A and D potency, Newfoundland Cod Liver Oil is markedly superior to Norwegian, Scottish and Icelandic oils.

They have also shown that vitamin A suffers considerable deterioration when stored in white glass bottles.

For years, Mead's Cod Liver Oil has been made from Newfoundland Oil. For years, it has been stored in brown bottles and light-proof cartons.

Mead's 10 D Cod Liver Oil also enjoys these advantages, plus the additional value of fortification with

Mead's Viosterol to a 10 D potency. This ideal agent gives your patients both vitamins A and D without dosage directions to interfere with your personal instructions. For samples write Mead Johnson & Company, Evansville, Ind., U. S. A. Pioneers in Vitamin Research.

SOUTHEASTERN SURGICAL CONGRESS AND ANSLEY HOTEL

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END-RESULTS IN FRACTURES OF CALCANEUS

Rudolph S. Reich, Cleveland (*Journal A. M. A.*, Dec. 3, 1932), reports the results of surgical intervention for correction of pain and disability in eighteen patients with fractures of the calcaneus, nine recent and nine of long standing. Operative correction was performed immediately on the nine patients with recent fractures, and fusion operations were subsequently performed on all except two patients treated by the Bohler method. Arthrodesis in the old cases gives a uniformly excellent result and materially shortens the period of disability. In the recent fractures, anatomic correction fails to solve completely the problem of disability. For these an arthrodesis is, therefore, recommended as soon as possible after anatomic correction.

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NEXT ANNUAL SESSION, MACON, MAY 9, 10, 11, 12, 1933

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DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
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CLINICAL SIGNIFICANCE OF THE CLASSIFICATION OF THE GLIOMAS*

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Atlanta

For a long time different types of gliomas have been clinically recognized. In 1912 Tooth¹, studying Horsley's cases, attempted to correlate the microscopic picture of these tumors with a prognosis. From the work of Cajal and his students in neurologic histology, newer staining methods and a clearer understanding of the cellular elements of the nervous system has been established. Bailey and Cushing, Globus and Straus, Penfield, and others have used these newer staining methods in studying gliomas. From their work and the contributions of Mallory, Spiller, Rosenthal, and Ribbert, there has developed a histologic classification of the glioma growths.

This classification, for the most part based on morphologic studies, is open to criticism. Roussy² has suggested that subsequent histochemical and physiochemical investigations may change the concept of the gliomas. In spite of the possible limitation of the classification it is now possible, following microscopic studies of these tissues, to foretell in the greater number of instances the future of these brain tumors. Not only as a guide to the prognosis are these histologic studies valuable, but the gross recognition of these various types of gliomas is of prime significance to the surgeon at the time of operation. In the post-operative administration of deep radiation therapy this knowledge is indispensable to the radiologist. So that, as Penfield³ has suggested, until newer investigative methods have proved their value, the prognosis and therapeutic measures of the

various gliomas will rest upon this morphologic classification.

Upon the recognition of the dominating cell type depends the diagnosis of these different gliomas. A review of the histologic development of the central nervous system will help to clarify the classification, and at the same time illustrate the absolute necessity of recognizing the various cells in establishing a microscopic diagnosis. From the medullary epithelium (Fig. 1) the first cells to develop are the germinal cells, which give rise to the neuroblasts. With further development of these germinal cells some of the epithelial cells are separated and elongated into what Castro has called primitive spongioblasts. Some of these cells lose one of their expansions and become unipolar in character while others remain as bipolar spongioblasts.

Some of the germinal cells continue to divide, from which develop the undifferentiated cells of Schaper. Bailey and Cushing⁴, in describing a type of glioma composed of this type of cell, proposed the term medulloblast, implying that such cells have a bipotential future, some developing into neural cells and others as spongioblasts. The neuroblasts develop through a stage of bipolarity, unipolarity, and multipolarity to the adult neuron. A further development of the spongioblasts is the attachment of one of its processes to a blood vessel. These are the astroblasts and from them develop the adult glial cells, both the fibrous and protoplasm astrocytes.

The oligodendroglia are probably of neuroglial origin and are void of any vascular "sucker foot". Along with the histologic development of the neural and glial elements, the epithelium covering the choroid plexus is being formed as well as the ependyma or that layer of cuboidal cells which line the ventricular cavities of the central nervous system. The possibility of microglia being of central nervous system origin is very ques-

*Read before the Medical Association of Georgia, Savannah, Ga., May 20, 1932.

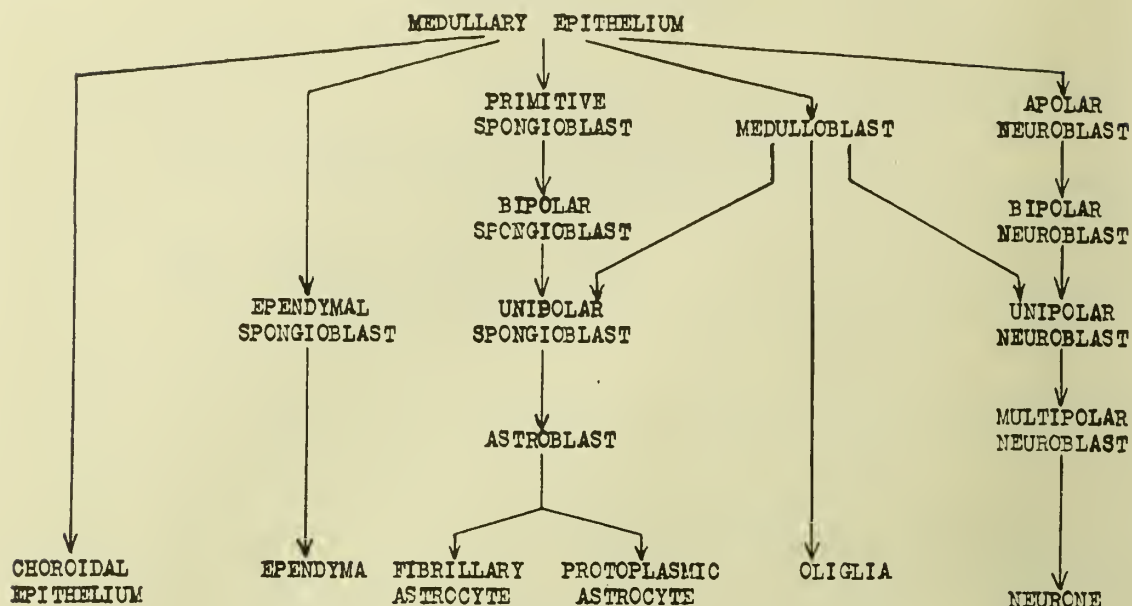


FIG. 1. (After Bailey)
Diagrammatic histologic development of the central nervous system.

tionable. These cells are the macrophages and a tumor composed of cells of this type has escaped observation.

Keeping in mind this hasty review of the histologic development of the central nervous system makes it easy to realize the wide range in microscopic studies encountered in studying the gliomas. Also the difficulty presented in some sections in establishing the dominating cell type. In the greater number of instances the diagnosis can be made from routine hematoxylin and eosin stains. In the more difficult sections special staining methods must be employed in order to stain the individual cells in their entirety. This being persistently true where more than a diagnosis is desired. These staining difficulties with silver and gold impregnation prompted a technique⁵ which was worked out in Sachs' laboratory in 1927. This modification is not only applicable to fresh tissue that has been properly fixed but gives excellent sections on old tissue regardless of the preservative agent.

In discussing the various types of gliomas clinically, the more common types will be considered, for it is not infrequent that from the clinical history and neurologic examination that a pre-operative diagnosis can be ventured as well as the prognosis of surgical efforts. Before taking up the various types of this group of tumors a few remarks about the gliomas in general should be emphasized.

Brain tumors occurring as the fourth most frequent of neoplastic diseases, should command the attention of the entire profession. The term glioma, to many, carries with it all the misgivings and hopelessness as the term malignancy. It is a clinical fact that gliomas constitute less than 50 per cent of intracranial neoplasms, and are malignant only in so far as the central nervous system is concerned. Metastasis to other parts of the body does not occur. In a recent study, by Cushing⁶, of over 2,000 verified brain tumors there were 862 gliomas, or less than 50 per cent. It has been from the glioma cases that erroneous ideas have been gained concerning a poor prognosis in brain tumor cases, and from one particular type of glioma has this general opinion been born. So, if for no other reason, the clarification of this erroneous idea justifies the histologic grouping of the gliomatous tumors.

Astrocytoma

This type of glioma constitutes the largest single group of the classification and from follow-up studies over a long period of time these lesions offer the most favorable outlook following surgical treatment. The astrocytomas occur as two different histologic types, the protoplasmic and fibrous. These glioma occur as cerebral and cerebellar lesions presenting different clinical courses and a different prognosis according to these two loca-

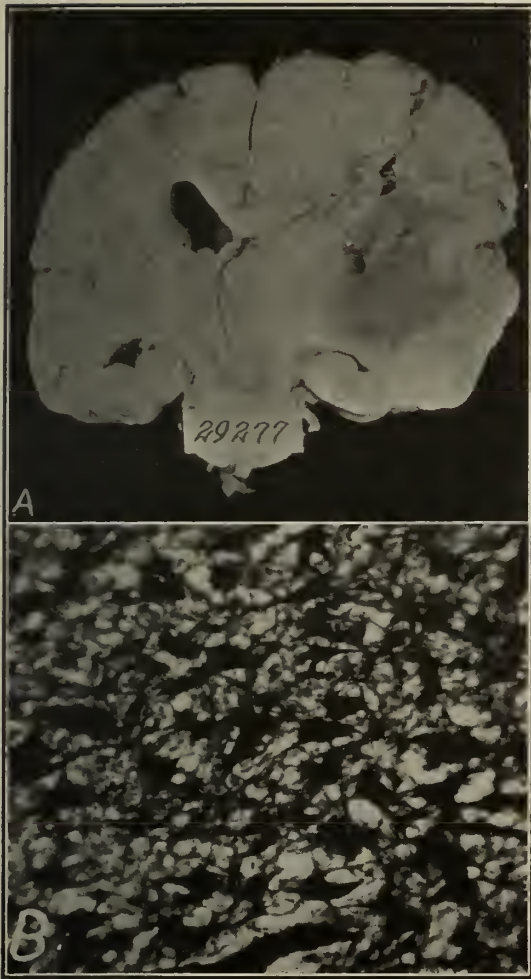


FIG. 2. A and B—ASTROCYTOMA

A. The cystic character is well illustrated in this specimen. Jacksonian attacks occurred two years before first operation. This patient was operated upon three times over a period of five years (Dr. Dowman). At no time during the observation of this patient was there noted any swelling of his optic nerve heads.

B. With modified silver staining methods the glial cells which characterize these tumors are clearly depicted.

tions. The protoplasmic type occurs most frequently as a cortical lesion, whereas the fibrous lesions are usually subcortical in location. Such subcortical lesions have in Cushing's experience⁷ occurred deep in the frontal lobes and in a sufficient number of cases to prompt a clinical syndrome "to justify a reasonably precise preoperative diagnosis". Convulsive seizures, personality changes, a contralateral facial weakness with or without generalized pressure symptoms in adults should immediately suggest the possibility of such a lesion. These growths may attain enormous size before pressure symptoms occur and ventricular air studies may be necessary before establishing a diagnosis.

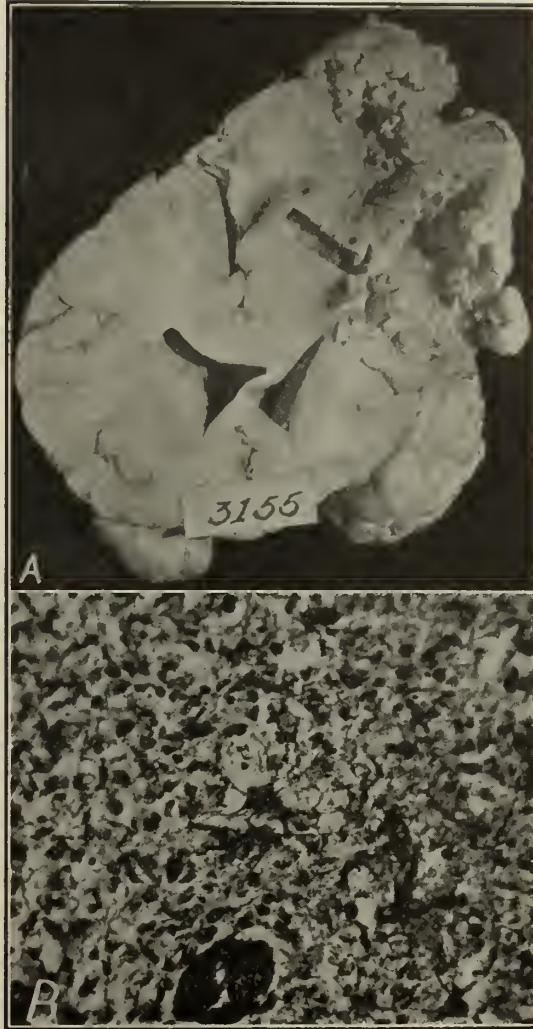


FIG. 3. A and B—GLIOBLASTOMA MULTIFORME

A. Occurring in a male, forty-six years of age, this lesion grew rapidly, death occurring less than one year after onset of symptoms. Note the invasive character of this type of glioma, there being ill defined demarcation between tumor and brain tissues.

B. (Modified silver X 200) Composed primarily of small cells with tail like processes, astrocytes and other cellular elements are to be found in these lesions. Polynucleated giant cells and characteristic blood vessel changes are easily seen in routine microscopic preparations.

Occurring as cortical lesions, localizing symptoms may be present long before pressure phenomena are manifested. Such a course in a case of this type is illustrated by the following report:

C. H. B., a male, aged 31 years, was admitted to the Piedmont Hospital February 17, 1932, referred by Dr. G. J. Dillard, of Columbus, Ga. In November, 1928, the patient had an unconscious attack lasting one hour. Such attacks continued at monthly intervals until 1931, when he began to experience numbness in the fingers of the left hand, which spread up the arm to involve the entire extremity, with an associated rhythmic jerking of the fingers and forearm on this side. Following the motor attacks he would become unconscious. In February, 1932, he began to have



FIG. 4. A, B, and C—MEDULLOBLASTOMA

A. This type of glioma occurring most commonly in children and usually in the fourth ventricle, most frequently gives rise to headaches, vomiting and choked discs before any localizing symptoms develop. As illustrated in this figure, the mechanics of a secondary hydrocephalus are well understood, the tumor filling and invading the posterior fossa structures.

B. (H & E X 200) These embryonic cells tend to palisade and "pseudo-rosette" formation and little difficulty is to be encountered in microscopic diagnosis. On account of their embryonic character these tumors respond to deep x-ray therapy more favorably than any of the other glioma.

C. (Modified silver X 200) With special stains it is found that these tumors microscopically are not a pure cell type, spongioblastic and neuroblastic elements are to be found in some sections.

headaches. On February 26, 1932, a sharply demarcated astrocytoma was grossly removed from the right motor cortex.

The fundi in this case were normal and aside from headaches the only definite evidence of increased intracranial pressure was a spinal fluid pressure of 260 mm. The unconscious attacks and localized seizures antedated the headaches by a period of many months which is clinical evidence of the benign character of this type of glioma.

Further evidence of the slow growth of these tumors is their tendency to undergo cystic degeneration. Particularly are cystic changes frequent in the cerebellar growths. These tumors are frequent in children and Cushing⁸ has suggested a congenital origin for such lesions. The survival period in some instances following operation has exceeded ten years. With the removal of an intramural nubbin from these large evacuated

cystic cavities a permanent cure is to be expected. Cystic changes in the cerebral growths are not infrequent and in a few instances calcium deposits in the cyst wall are to be seen on roentgen ray studies of the skull. The cerebral growths are usually found in young adults, but when found in older individuals exploration is not to be withheld because of age for it has been generally recognized that patients with this particular type of glioma show the least tendency to operative shock. So in summing up the astrocytomas, it is to be said that they are the most frequent of gliomas, are primarily tumors of young individuals, occurring as cerebellar and cerebral lesions, and with operation they are the most hopeful of all of the gliomas.

Glioblastoma Multiformi

This type of glioma constitutes the second largest number of the glioma group of tumors, being approximately one-third of all such lesions. They are primarily tumors of adults and the cerebrum, occurring most frequently in the middle decades of life as subcortical lesions. The malignant character of these tumors, with a very short period of survival from onset of symptoms without surgical interference to death, has doubtless prompted "the generally unfavorable impression regarding the gliomas as a whole". Occurring as subcortical cerebral lesions, ventricular block with a resulting hydrocephalus does not occur. Originating in a so-called "silent area" of the brain they may attain considerable size before recognition. Allowed free range these tumors become quite massive in size (Fig. III). Progressive paralyses, convulsions, aphasia, visual field defects or kinesthetic disturbances frequently furnish the clue to localization, coupled together with the general pressure symptoms which sooner or later are to be found in these cases.

Although they most frequently originate as subcortical lesions and grow rather rapidly; appearing as they do in a few instances as cortical lesions they give rise to localized convulsive seizures and it has been observed in these particular cortical types that the malignant character is less and the survival period following operation has been as long as five years.

As a general group these tumors are radio-resistant, but there occasionally occurs one in which the surgical efforts could scarcely account for the disappearance of the symptoms which follow radiation, there being a survival period of months and even years after roentgen ray therapy. The following history is rather characteristic of this group and certainly the post-operative course has been influenced by the radiation.

Mrs. E. G. K., aged 36 years, was admitted to the Piedmont Hospital November 3, 1930, referred by Dr. H. E. Heinitsh, Jr., of Spartanburg, S. C., with a history of a change in personality, beginning six months previously. Some four months later she developed a tendency to drowsiness, followed two weeks later by momentary attacks of loss of consciousness. Associated with such attacks there was projectile vomiting. During this interval headaches were frequent. On examination there were bilateral choked discs, a weakness of the left side of the face, and an absence of the superficial reflexes on the left. On November 5, 1930, Dr. Dowman, through an osteoplastic flap, after an incision had been made in the right frontal lobe, encountered an infiltrating tumor at a depth of 2 cm. Partial removal was done and the examination of this tissue showed it to be a glioblastoma multiformi. Before leaving the hospital she was given a series of deep roentgen ray treatments and was discharged November 22, 1930. The last report, in March, 1932, some sixteen months after operation, was that she was still alive and active.

Such a case as this is typical of the history of onset in this group of gliomas. Left alone the survival period from onset of symptoms is on an average less than six months. With operation, decompression, subsequent operations, and radiation, life can be prolonged, these unfortunates be made comfortable, and escape the horrors of blindness and the insufferable headaches of increased intracranial pressure. With the introduction of the electro-surgical unit into neurosurgery more vigorous attempts are made in attacking this type of glioma and it is possible that the survival period may be prolonged.

Medulloblastoma

This type of glioma comprises the third largest group of the classification. Like the cerebellar astrocytomas they are primarily tumors of the cerebellum and of children, being most frequently found as midline lesions. Because of their location, pressure symptoms due to an internal hydrocephalus appear quite early. In a recent study of neoplasms in children by Helmholz¹⁰, brain tumors occurred as the largest single group, being 40 per cent of the 750 cases studied by him. This fact alone should put one on

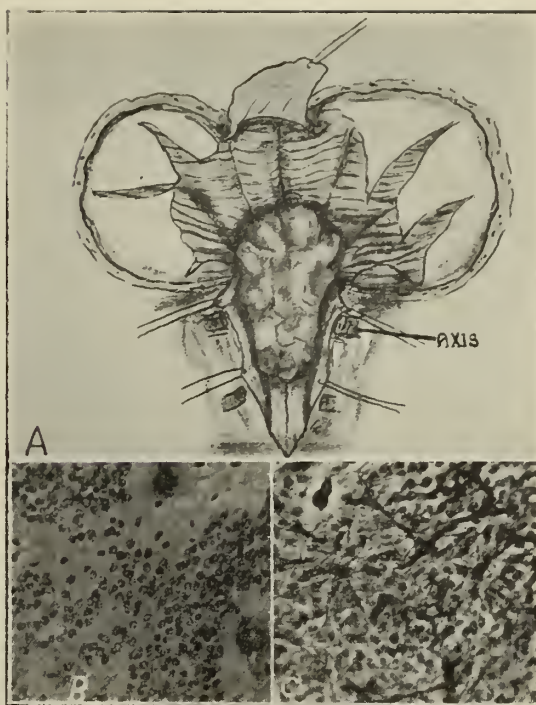


FIG. 5. A, B, and C—EPENDYMOMA

A. A common location for these tumors is as is shown in the sketch in the posterior fossa, the tendency to grow downward into the cervical canal is illustrated in this operative case. Not infrequently pain in the suboccipital region may be of definite diagnostic value in anticipating such a lesion prior to operation.

B. (H & E X 200) The Architectural arrangement of these cells is characteristic of this type of glioma. They tend to arrange themselves about the blood vessels with an intervening "clear space".

C. (Modified silver X 200) The "clear spaces" about the blood vessels are found to be filled with cell processes when special staining methods are employed in the microscopic study of these sections.

guard in children who present subjective or objective symptoms referable to the central nervous system. So that a child with early morning vomiting and headaches, which do not respond to the usual medical treatment, will frequently have a choked disc upon ophthalmoscopic examination. Such a typical history is not infrequent and illustrates the clinical features of this type of glioma.

A. I., a female, aged two years 6 months, was admitted to Henrietta Egleston Hospital on August 17, 1931, referred by Dr. C. E. Patillo, of Atlanta, with a history of a staggering gait of five months' duration, early morning headaches and vomiting of six weeks' duration. Aside from ataxia, choked discs, and bilateral Babinski reflexes there were no other neurologic symptoms. A ventricular air study showed an internal hydrocephalus with a dilated third ventricle. Through a suboccipital approach sufficient tumor was removed to permit a release of the hydrocephalus. She was given a series of deep roentgen ray treatments and discharged from the hospital, three weeks after admission, free from pressure symptoms. She was given a second series of treatments six weeks

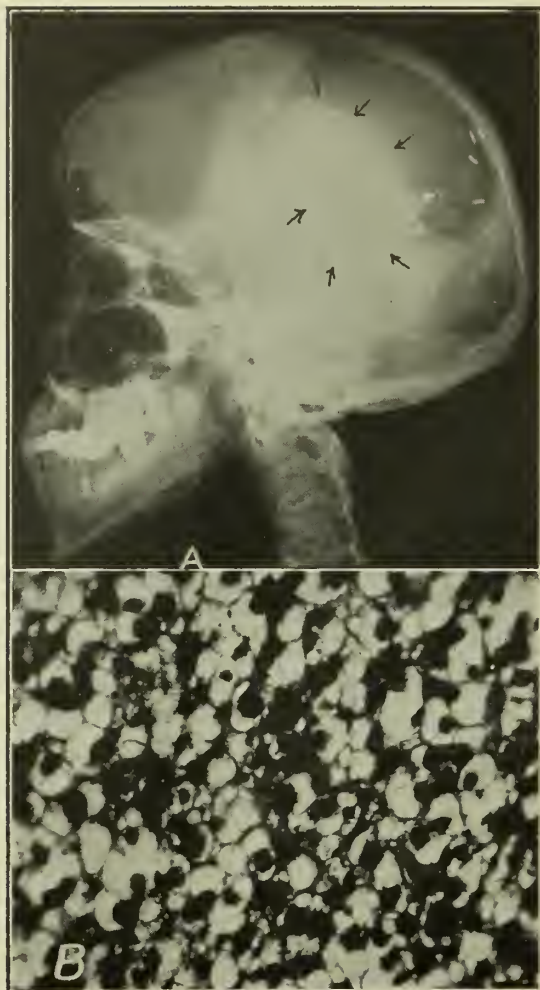


FIG. 6. A and B—OLIGODENDROGLIOMA

A. The extensive calcification is outlined by the arrows. The silver clips were used at the time of his first operation by Dr. Cushing in 1929. Such calcium deposits are most common in this type of glioma.

B. (Modified silver stain X 200) The pathological oligodendroglia stain in their entirety and present a characteristic microscopic picture. It is not infrequent to find astrocytes scattered among the tumor cells.

later, has reported for observation regularly, and has been quite comfortable and active for almost a year.

As with all of these cases the above patient was given a prophylactic radiation over her spine, for in this type of glioma transplants to the meninges are not infrequent. Being of an embryonic cell type these tumors respond most favorably of all gliomas to roentgen ray therapy. To radiate them prior to operation is a gross mistake, for the added increased pressure may not only net a fatal result but similarly located lesions may be of a type that are radioresistant. The lesions described in the first group are of such character. Again the value of a histologic classification of the gliomas is illustrated. If the hydrocephalus is

relieved by decompression and either by partial or complete dissection of the lesion, followed by deep radiation these patients with medulloblastoma are made comfortable and life prolonged for a variable period of time.

Ependymoma

These somewhat encapsulated tumors constitute the next largest of the glioma series and are in most instances of cerebellar origin, arising from the roof of the fourth ventricle. However, in studying eight cases of Sachs' in 1928, five were located above the tentorium. At that time these growths were the only cerebral lesions among his gliomas in young adults that showed calcification on roentgen ray studies of the skull. These tumors, though sharply demarcated, on account of their size and location, render enucleation a formidable procedure. Within the past eighteen months it has been our practice to do ventricular decompressions two to four days prior to operation in posterior fossa tumors, feeling that this release of pressure minimizes the dangers of cerebellar surgery and with the electrosurgical unit this type of lesion is to be more vigorously attacked.

Figure five illustrates the gross appearance and location of a cerebellar lesion of this type. Growing far down into the spinal canal the danger of lumbar puncture is evident. The following case illustrates some of the dangers that might have been eliminated had a careful neurologic examination and the possibility of a brain tumor been kept in mind.

Mrs. J. F. C., aged 37 years, was admitted to Grady Memorial Hospital January, 1931, with a history of headaches of a severe character of three years' duration, with associated vomiting. In November, 1930, a hysterectomy was done elsewhere for the relief of headaches. Unsuspecting a cerebral lesion, a spinal puncture was done in January, 1931, which, on account of evidence of medullary compression, prompted a neurologic examination. There was a bilateral choking of her discs, (a history of failing vision for three months), lateral nystagmus, absent corneal reflex on the left, marked ataxia, and a Babinski on the right. Figure five illustrates the operative findings, the tumor being partially removed. Her pressure symptoms subsided and since discharge from the hospital she has been actively engaged in household duties.

These tumors may remain dormant for a long period of time. Bailey⁹ cites a case of a cerebellar tumor of ependymal origin which

was exposed but not disturbed at operation. The patient was in excellent health eleven years after operation. Once they begin to grow the increase in size is usually very rapid. Being more commonly situated in the posterior fossa, headaches, vomiting and choked discs are among the first symptoms to appear. Growing down into the spinal canal localized suboccipital headaches may be of definite localizing value.

Oligodendroglioma

Comprised of an adult type of glial cell these tumors are very insidious in their growth. So true is this that localizing symptoms may appear months and even years before there is any evidence of increased intracranial pressure. In a greater number of cases the localized symptoms have prompted operation before any general pressure symptoms appeared. These are tumors of adults, occurring as cerebral lesions and because of their enormous size present difficult technical problems at the time of operation. Calcium deposits are very frequent and is a constant roentgen ray finding in cranial radiograms. The extensiveness of such calcification is illustrated in figure six.

Pinealoma

This group constitutes a small percentage of the gliomas. Aside from the generalized symptoms which result from the internal hydrocephalus these patients show rather characteristically a loss of conjugate movements of the eyes upward. This is due to pressure on the corpora quadrigemina bodies. Ventricular air studies of these lesions make localization unquestionable, as shown in figure seven. In this communication the spongioblastoma unipolari, a relatively benign group of gliomas, constituting a slightly less percentage than the oligodendrogliomas, and the rarer types of the remaining glioma groups have been purposely omitted. The first mentioned group, were it not for the tendency to grow in such areas as to make surgical procedures most difficult, would form very favorable operative risks; the rarer types to date, have been too few upon which to base any final clinical facts.

In conclusion, brain tumors occurring as the fourth most common of neoplastic diseases, it is to be recognized that the gliomas,



FIG. 7. PINEALOMA
Injection of air into the ventricles with subsequent x-ray studies confirmed the clinical diagnosis of a tumor of the pineal gland in this case.

usually accepted as the malignant group of brain tumors, constitute less than fifty per cent of all intracranial neoplasms and of this glioma group there is a histologic classification available, upon which classification the prognosis, treatment, both operative and post-operative, depends.

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DISCUSSION ON PAPER OF DR. FINCHER, JR.

Dr. Ralph H. Chaney, Augusta: In discussing Dr. Fincher's paper I will say that he has brought to our attention more clearly in the paper than he brought out in demonstrating it the fact that recent studies of the histopathology of brain tumors give a very definite, concrete idea of what we can anticipate in regard to the case. In reading his paper I was impressed with the histologic picture of the tumors he presented in reference to the patient's symptomatology. He showed that if you know the histopathologic picture of the lesion you can almost anticipate certainly what the

future course of that lesion is going to be, and what the future of that patient is going to be. You can anticipate from studying the pathology what the future treatment should be and what you will be able to do with irradiation and to a large extent what the life duration will be. It seems to me that this classification of intracranial gliomas is going to put these lesions in the same group that Broders and others have put their malignant lesions. I admit that the surgical world and others have not yet accepted the conclusions of Broders and some other workers that if you can see the histopathologic picture of the lesion you can anticipate what the life duration will be. It is dependent upon the intracellular structure of the lesion itself. If you have a lesion in which the cells are close in their relationship to the morphologic cell you have a very malignant lesion. If you have a cell that springs off from an adult form the lesion will be benign. Again, a cell that is springing from the low grade, early development, you have a tumor that is markedly susceptible to irradiation, but if it is higher in the chain it is more susceptible to surgery than to irradiation.

Dr. Lee Howard, Savannah: Dr. Fincher gave us a practical working classification of gliomata. This is not a small achievement, when we consider the relatively scant pathologic material from which such a well rounded and comprehensive classification has been worked out. Even to differentiate between gliomata, that as a class are resistant to radiation, and those in which radiation is in even some degree effective, would be well worth while. That such a differentiation can be made from a histopathologic study of these tumors is of great value to the patient.

Brain tumors of this sort are not so rare as we would suppose. Dr. Fincher's statistics show that 4 per cent of all tumors occur in the brain, and nearly half of these are gliomas. This, however, is not an index of the number of specimens from which this painstaking classification has resulted. Many brain tumors are inaccessible at operation, few cases ever reach the brain surgeon, and when we consider that most of the tissues accumulated from operative cases date back not much more than a decade, we find that there has been relatively scant material as compared with studies of other tumors.

This worthwhile classification based on a correlation between the histopathologic study of tumors removed and clinical manifestation and end results, is an index of the zeal and training of those working in this very specialized field of medicine. It means, of course, the careful working out of each case from every angle.

We are fortunate that much of the pioneer work in this important and rapidly developing branch of surgery was engineered by a genius, Harvey Cushing, great not only in attempting the untried, but as a teacher and author.

I only know Dr. Fincher through reading and hearing his paper and though it is not claimed that he is a second Cushing or even another Dowman, I am convinced that the skill and genius of a great teacher

have been passed on even unto the third generation of his pupils.

There has been much in this meeting of encouragement to the pathologist, especially in the papers of Dr. Dean Lewis and Dr. Fincher. In the past it has been the feeling that histologic study and pathologic reports were for the edification of the surgeon rather than of any value to the patient. An end product for hospital records serving no practical purpose. Now that we are seeing tumors early, even though we are having trouble with classification, we are really doing something for the patient in determining treatment and prognosis.

Dr. Edgar F. Fincher, Jr., Atlanta: (closing): I wish to thank Dr. Chaney and Dr. Howard for their discussion. Roussy has suggested that this classification is open to criticism, as I suppose they all are, and has brought out the idea that chemical investigation and other methods will have to be worked out, but until that is done we will have to depend upon our pathologic findings and histologic studies and the other means at our disposal for the recognition and treatment of these conditions.

OBSERVATIONS OF SOME COMMON BREAST LESIONS*

WM. PERRIN NICOLSON, JR., M.D.

Atlanta

Accurate clinical diagnoses are necessary if a patient is to be given the best treatment and obtain satisfactory results. Breast lesions are no exceptions, and the procedure to be carried out varies so much in different conditions that a careful differential diagnosis should be made at all times. The first point to be determined in considering a lesion of the breast is whether it is of an inflammatory nature or a new growth. If the former, the proper treatment can be instituted and prognosis given at once. If the latter, we are faced with the problem as to whether the new growth is benign or malignant. If malignant, we must determine, as well as we can, the degree of the malignancy. These observations are drawn largely from cases seen on the Surgical Service of Steiner Cancer Clinic.

If a patient has a breast lesion characterized by pain and tenderness, rapid increase in size, local heat, redness of the overlying skin, fever, rapid pulse rate, leukocytosis and tender enlarged regional lymph nodes, we could easily

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recognize it as an inflammatory one, while the opposite conditions would be present with a new growth. As with every other condition with which we deal in the human body, there is no "always" nor any "never"—we may have exceptions to all of these. The new growth may show a rapid increase in size, be tender and painful and, in the so-called "inflammatory type" carcinoma, show a redness of the overlying skin and local increase in temperature. On the other hand, inflammations, especially chronic ones, such as tuberculosis, may lack the "normal" characteristics of an inflammatory lesion. This differentiation, however, rarely presents difficulties.

<i>Inflammatory</i>	<i>New Growth</i>
Pain	No Pain
Tender	Not Tender
Rapid Growth	Slow Growth
Local Heat	No Local Heat
Red	Not Usually Red
Tender Nodes	Non-Tender Nodes
Fever	No Fever
Rapid Pulse	Slow Pulse
Leukocytosis	No Leukocytosis
<i>Benign</i>	<i>Malignant</i>
Under 35 Years Old	Over 35 Years Old
Long Duration	Short Duration
Encapsulated	Non-Encapsulated
Slow Growth	Rapid Growth
Freely Movable	May Be Fixed
May be Multiple	Usually Single
No Regional Nodes	Non-Tender Nodes
No Skin Attachment	Skin Attached
May Have Pain	No Pain

If now we have recognized the lesion as a "new growth" we have the more difficult task of determining whether it is benign or malignant. This differentiation frequently cannot be made clinically, and the lump or the breast must be removed, and even then the pathologist may not be able to say with certainty. A frozen section may be examined, but here, too, the pathologist is often un-

certain. The final answer is frequently not known until many days after an operation, hence it is *impossible to always* make the differentiation clinically. There are certain points which aid us in arriving at the proper conclusion, and the more important of these will be considered.

The age of the patient is perhaps the most important factor. No age is immune to cancer since babies are born with it and octogenarians frequently have it, but as a general rule, especially in breast cases, we do not expect to find a cancer before 35. So we arbitrarily refer to those over 35 as being in the "cancer age". Everything else being equal, a growth in a young person is considered benign until it is proven to be otherwise. I had a young woman who died at the age of 23 with general carcinomatosis following the removal of both breasts for carcinoma, the first at the age of 14—this case was an exception—and others will be seen, *but as a rule* one is safe in considering lesions in the young breast benign.

A lump in the breast of long duration, without much, if any, increase in size usually is a benign condition. We must remember in this connection, however, that a benign lesion sometimes undergoes malignant change, and hence a patient may have had a lump in the breast for many years, and yet it may be malignant. To help us make this distinction it is important to determine if it has grown at a more rapid rate during the past year than previously. Within the past month I saw a woman who had had a lump in her breast for *nine* years, and there had been no rapid increase in size, yet it was malignant.

Benign lesions are usually encapsulated; malignant ones usually are not, but rarely may be. The difficulty in this instance arises in determining whether a given lesion is encapsulated or not. If encapsulated it should be freely movable beneath the skin, in the breast, and on the deep structures. If when the growth is moved there is a tendency for the overlying skin to move with it, or if it produces a dimpling of the skin, we should suspect a malignancy. Rarely do we see a malignant growth which does not show a slight dimpling of the skin. It has been said that any lesion of the breast which can be seen is

malignant. This is not true. Many visible lesions are benign, but any lesion which produces a visible *retraction* of the skin or "dimpling" is usually malignant.

Benign lesions may be and frequently are, multiple while malignant ones rarely occur in but one place in the breast. Benign tumors rarely show enlarged regional nodes whereas malignant ones usually do.

Cancers practically *never* produce pain in the early lesions. Hence a tender, painful nodule in the breast, if not inflammatory, is due to some benign lesion, most frequently a so-called chronic cystic mastitis, but more properly referred to as an abnormal involution or mazoplasia. Fortunate indeed is the woman who has her attention drawn to a lump in her breast by pain or tenderness! She can rejoice that it is tender. Unfortunately the dangerous lumps are not painful or tender and hence escape the attention of even the patient herself.

Every woman should be instructed how to examine her breasts and should constantly be on the lookout for a "lump". If the breast is pinched up between the fingers, "lumps" can be felt in all of them but if the breast is gently rolled over the chest wall with the flat hand, only lumps of significance will be detected. Education of the laity causes many to develop a cancer phobia and they "find" many lumps which if examined in this way, cannot be detected.

After the breast is removed the pathologist, following Broder's work at the Mayo Clinic, can tell us of its relative malignancy—thus enabling us to give a more accurate prognosis and at the same time guide us in the post-operative treatment. A very cellular, highly malignant tumor, being radio-sensitive, requires post-operative irradiation, while a less malignant sclerosing type of lesion is radio-resistant and hence requires no post-operative irradiation.

Some years ago Dr. Burton Lee devised an equation whereby we may determine clinically the malignancy of a given lesion. This he calls the "clinical index of malignancy" (C. I. M.). It is obtained by determining the value of four factors, age, lactation, rate of growth and extent according to the following table:

Lee's Table for Determining the Clinical Index of Malignancy

Age	A	55 and over	= 1	X 2
		41 - 55	= 2	
		40 and under	= 5	
Lactation	L	present	= 3	X 3
		absent	= 0	
Rate of Growth	R	slow	= 1	X 4
		moderate	= 2	
		rapid	= 4	
Extent	E	small	= 1	X 5
		large	= 2	
		nodes	= 4	
C. I. M. = 2 A + 3 L + 4 R + 5 E				
11 — 25 = Grade A				
26 — 39 = Grade B				
40 — 55 = Grade C				

Then the C. I. M. = 2 A + 3 L + 4 R + 5 E.

These are then graded A, B or C as indicated, which represents the relative degree of malignancy, those in grade A having the best chance and in Grade C, the poorest. No treatment should be instituted, not even a biopsy taken, without considering all of these factors. We recently had a patient whose doctor had *incised* a lump in a *lactating* breast and sent a piece of it to a pathologist for an opinion. In such a case it would have been far better to have done nothing at all.

Some benign lesions, because of their enormous size, or rapid growth may be mistakenly considered as hopeless and incurable. Notable among such conditions are the so-called benign hypertrophies, or virginal hypertrophies, which usually occur in young girls. They may be bilateral or unilateral, grow very rapidly and attain an enormous size. If seen and recognized early the breast can frequently be saved by removing the diseased portion through a so-called Warren incision in which the breast is dissected up from the chest wall and the growth removed from the back of the breast. A beautiful cosmetic result is thus obtained since the incision follows the "fold" of the breast and is concealed by it. If not operated upon in the early stages these breasts must be sacrificed because of their enormous size.

Another benign growth in the breast which attains enormous size is that known as Brodie's disease, which is a multiple sero-cystic sarcoma. While these are referred to as "sarcomas" they are not malignant, but

are relatively benign and are cured by a simple amputation. An axillary dissection is unnecessary.

"Eczema" of the nipple, especially if persistent, and accompanied with some thickening of the skin and occasional bleeding, (in later cases covered with a scab) should be regarded with suspicion especially if in the "cancer age". It may be and frequently is due to a Padget's disease, though benign dermatitis occurs as well as ones from some medication. Soothing lotions or ointments should be tried, or perhaps some five per cent ammoniated mercury ointment, and if then the condition persists the breast should be amputated, and a radical operation done, if it is found to be malignant. Sooner or later a lump will appear beneath the nipple—some say the lump is always primary and others that it is never primary—but who can say which came first the hen or the egg?

Unfortunately too many advanced and hopeless cases are seen. Many people look upon cancer as a loathsome disease and consequently shield the fact, even from their own families, that they have anything wrong with them until at last the putrid odor arouses suspicion. The incidence of such cases can only be reduced through a process of education i.e., education first of the profession and secondly the public. Until such education has been accomplished we will continue to see these advanced cases and they must be cared for. They deserve our care and thoughtful attention.

In all such cases some form of irradiation should be used. Surprisingly good results are frequently obtained, especially if it is a very cellular tumor. Irradiation may be given with x-ray or radium. If the former, we may use low voltage (superficial) or high voltage (deep) therapy. There are but few institutions which have sufficient radium to use it for external irradiation of breast tumors. In those they use it in the form of a "pack" and the actual element is used for external treatments.

The effects of the gamma rays of radium are available, however, for so-called interstitial irradiation. In this, either the radium element in needles, or radium emanations in either glass or gold tubes is placed in and

about the tumor itself. In this way sufficient destructive effects may be obtained to benefit the patient and yet not destroy the skin. In all cases where both interstitial radium and x-ray are to be used, x-ray should be used first, followed by radium.

Many cases are hopeless, so far as a cure is concerned, but can be made more comfortable, and perhaps made to live longer, by palliative operations. The surgeon should not consider his record or statistics, but only the comfort and welfare of the patient. The family should understand fully that the operation is not advised with any hope of permanently benefitting the patient, but simply to try to make her remaining days more comfortable. As with irradiation, some really astonishingly good results are frequently obtained by procedures which were not intended to be of permanent value, but merely for palliation.

In conclusion let me urge a careful examination and consideration for every patient with a breast lesion. Determine first of all whether it is inflammatory or a new growth and if the latter whether benign or malignant, and if malignant the degree of malignancy. Recognize such conditions as benign hypertrophy early when the breast can be saved, and Brodie's disease where an apparently hopeless condition can be cured with simple amputation. Give irradiation, either with x-ray or radium or both to hopeless cases, and in suitable cases perform a palliative operation. Lastly, spread the doctrine of periodic health examinations and remember that *every* solitary lump in a breast should be removed and examined by a competent pathologist. If a pathologist is not available it is safer to remove the breast instead of the lump, and then a delay of a week or ten days before the radical operation can be performed is not so hazardous.

DISCUSSION ON PAPER OF DR. NICOLSON

Dr. J. T. McCall, Rome: Very little can be added to Doctor Nicolson's splendid discussion of the subject. He was wise. I think, in beginning by emphasizing the clinical diagnosis. Never having had a pathologist with us in our small city, we have had to depend on clinical diagnosis and dissection of the tumor mass for gross pathology and diagnosis. If you make a wide excision of these tumor masses and carefully

dissect them in the vast majority of cases you will be able to make a definite diagnosis between malignant and non-malignant growths. If you are still in doubt I think it is better to do an amputation and send the entire specimen to a pathologist for thorough examination. Wait and if he reports malignancy delay six months after removing the gland bearing area. This is recommended by English surgeons. Bunce of England states that 50 per cent of the malignant tumors are found in the upper and outer portion of the breast.

Chronic cystic mastitis is difficult to differentiate from a malignant growth but after excision and dissection it is rather easy.

I do not believe we should encourage patients, or women in general, constantly to massage their breasts or look for tumors. I think they will be detected rather easily. The responsibility that rests on us is to educate women to report to their physician or surgeon for guidance. Another responsibility is to teach the physician to think seriously of this condition when these women do report and not pass it up lightly, as they often do.

In speaking of the sclerous carcinoma, I think it is a rather dangerous growth because although it does infiltrate and is hard to eradicate, also it is a slow growing tumor. If you are called upon to operate on a case of advanced carcinoma I believe irradiation should be used. Doctor Moore recently gave us an article on immediate irradiation following operation, which I think is a very wise procedure, using deep roentgenotherapy.

Dr. C. H. Richardson, Macon: To this very interesting presentation I can only add some generalizations. Sometimes I think our propaganda of education has outrun our own practice. We advise every woman with a lump in the breast to consult her physician early. When she does, she frequently is advised not to worry about it unless it worries her. We are losing there our opportunity to carry out our own propaganda. I feel that every lump in the female breast should be removed unless it is definitely inflammatory. It is better to err on the safe side. The growths like the benign fibromata and all the encapsulated growths can be removed without disfiguring the breast, and even in young girls it probably saves them from future trouble. In my practice if a patient presents with a lump in the breast I advise an exploratory operation. Under local anesthesia I remove the growth as widely as possible and submit it at once to a pathologist for frozen section. If the report comes back that the growth is malignant the patient can easily be given a gas anesthetic and the radical operation done. If it is a cystic growth I feel that the entire breast should be removed, for there is no use in removing one cyst and leaving others. In breast malignancies we do a radical dissection and follow with at least six post-operative irradiations. We feel that this has been of assistance. In the inoperable cases, that Doctor Nicolson showed irradiation is undoubtedly of benefit.

Dr. William Perrin Nicolson, Jr., (Closing): I wish to thank the doctors for their discussions. Because of lack of time the whole paper was not read. In it the points that Doctor Richardson mentioned about the solitary lump in the breast are covered. I agree with Doctor McCall that it is better and safer when there is a probability of a malignancy to remove the breast than to remove the lesion. As to local anesthesia, especially for small lesions, I think it renders the task unnecessarily difficult. If possible, I prefer to have a general anesthetic, and then small lesions can be removed with less damage to the breast.

AMEBIASIS-PREVALENCE AND PROTEAN MANIFESTATIONS†*

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David R. Thomas, Jr., M.D.

Augusta

In reviewing the numerous surveys relative to the incidence of infection with *Endamoeba histolytica*, one is impressed with the great diversity in the results obtained by different investigators. Bishop and Bishop,¹ in their study of amoebiasis in New York City, using Bellevue Hospital as a typical cross-section for any disease occurring in that city, find records of only 60 cases occurring from 1912 to 1927. Sanford,² examining 5000 stools, found 36 or 0.7 per cent positive for *Endamoeba histolytica*. Craig,³ examining 116 army officers, found 17 or 14.6 per cent positive. Of these 116 officers, only one gave a history of dysentery. Dougherty⁴ found 221 cases of amoebiasis reported in the statistics of the State Board of Health from 9 southern states. James⁵ has concluded on the basis of reliable surveys made since 1916, that the incidence of amoebiasis is likely to be between 5 and 10 per cent in areas where dysentery is not endemic, but higher where it is.

During the past ten years the records of the University Hospital in Augusta, Georgia, show 76 cases diagnosed as amoebiasis. A few were merely carriers, some had vague gastrointestinal symptoms and were of the neurasthenic type; others had diarrhea or dysentery, and still others presented unusual symptoms to be discussed later in this paper. Of

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the complete records of 71 patients, 58 were white and 13 colored, and 60 per cent of the total were males. We believe that the colored race has a relative immunity which is well exemplified by the incidence of this disease among the white and negro admissions to this hospital. This agrees with the findings of Musgrave⁶ and Musser⁷. Two-thirds of the 71 patients were local residents and had always lived here, and aside from one patient who had been overseas, and one a missionary, the remainder lived in rural districts. The divers occupations of these patients threw little light on the etiology. The average age was 37.6 years with the extremes from 3 to 80 years. The chief complaints are listed as follows:

Diarrhea and weakness	25 cases
Dysentery	16 cases
"Low grade fever"	3 cases
Vague gastrointestinal symptoms and lower abdominal pain	8 cases
Nervousness, loss of weight, loss of appetite, easy exhaustion	7 cases
Constipation with periodic abdominal pain	2 cases
Arthritis (left shoulder)	1 case

The physical findings were chiefly as follows:

Tenderness along the colon, especially over the cecum and sigmoid	16 cases
General abdominal tenderness	8 cases
Arthritis, left shoulder	1 case
Arthritis, left great toe	1 case
Extreme tenderness in right upper quadrant of abdomen	3 cases

Proctoscopic examination on 12 patients showed conditions such as, diffuse hyperaemia, punctate hemorrhagic areas; multiple ulcers of various sizes with flat bases, necrobiotic and shaggy. In one of the cases complaining of constipation a single large ulcer was found in the sigmoid.

The blood picture of 71 patients was characterized by a moderate secondary anemia and an average eosinophilia of 3 per cent. (See table No. 1).

Diagnosis: The diagnosis of amoebiasis depends upon the demonstration of the amoebae in the suspected material, such as, the stool, exudate, sputum or skin lesion; as the case may be. The material should be examined while warm in order to detect the motile amoebae. There are several species of amoebae present in the intestine of some individuals who are presumably normal. These apparently non-pathogenic amoebae must be differentiated from the *Amoeba histolytica* and at times this is quite difficult, especially when they are encysted. A good description of these various amoebae can be found in Wenyon's text book on Protozoology.

Recently Craig⁸ has perfected a complement fixation test for *amoeba histolytica*. He found it positive in about 92 per cent of cases having the pathogenic amoebae in the stools; whereas it was negative in all cases harboring only the non-pathogenic amoebae and various other protozoa. This test is done in a manner similar to the Wassermann test. Most syphilitic patients have given a negative result with the amoeba antigen, but on rare occasions an individual having a positive Wassermann reaction may give a false fixation with the amoeba antigen and in such cases amoebiasis must be definitely determined by the stool examination. While it is true that a diagnosis can and should be made by competent stool examination, we have found a few cases by means of this new fixation test when the parasites were overlooked in the stool examination. Upon receipt of a positive report we redoubled our efforts and finally demonstrated the amoebae in the stools. That the reaction is a specific one is shown not only by the positive reactions obtained in a large proportion of individuals harboring the pathogenic amoebae, but by the fact that specific treatment, followed by disappearance of the amoebae from the stools is followed within two to six weeks by a negative reaction, as will be reported in two of our cases.

In 1921 and again in 1928 Craig^{8,10} called attention to the fact that for every case of amoebic dysentery which occurs there are hundreds of cases of amoebic diarrhea, various vague gastrointestinal symptoms, nervous conditions, unexplained weakness and easy exhaustion: all of which are really due to the invasion of the intestine by the pathogenic amoebae. Although most of these patients have a normal or subnormal temperature, a few have afternoon temperature elevations to 100 degrees or more, and this, coupled with some of the vague symptoms just mentioned, may be mistakenly attributed to an early pulmonary tuberculosis. The following case gave rise to such suspicions:

A negress, 17 years of age, was admitted July 23, 1931, with a complaint of weakness, malaise and vague abdominal discomfort for the past month. Two days before admission she had a slight diarrhea but gave no history of diarrhea before this time. She frequently had urticaria. The patient had lost six pounds since the onset of her present illness. Physical examination was as follows: temperature 100 degrees, pulse 100 and she was undernourished and anemic. The heart and lungs were essentially negative. An urticaria was present over the right upper quadrant of the abdomen. Hemoglobin by Sahli's method was 30 per cent, R.B.C. 3,200,000 and eosinophiles one per cent. All usual examinations, including the

Wassermann and routine stool, were negative. The report of the roentgenogram of the chest was: "Lungs essentially normal. Right diaphragm smooth and elevated 4 cms. above the left." This report led us to search the stools more carefully and on August 5th a warm stool revealed many *Amoeba histolytica*. This finding with the roentgenogram led to a tentative diagnosis of amoebic hepatitis. Since admission the patient had shown a slight afternoon elevation of temperature. During that period she had no diarrhea, in fact enemata were necessary. On August 8, 1931 the complement fixation test for amoebae was reported positive. This patient was given one grain of emetine hydrochloride intravenously daily for ten days. The temperature gradually subsided and the patient rapidly improved; within a week the hemoglobin had increased to 40 per cent. Two weeks after treatment both diaphragms were reported normal in the roentgenogram. On September 2 the complement fixation test and stools were negative for *Amoeba histolytica*.

Three patients presented signs resembling cholecystitis. In one of these cases there was tenderness in the right upper quadrant and a diagnosis of cholecystitis was made. The W.B.C. was 13,700 and the differential count showed 79 per cent polymorphonuclear leucocytes. Exploratory laparotomy revealed an apparently normal gallbladder, but the entire colon exhibited an inflammatory process and enlargement of the mesenteric glands. Biopsy of a gland showed marked hyperplasia and fibrosis of the capsule. Examination of a warm stool later revealed many *Amoeba histolytica* and the patient responded promptly to treatment.

On September 10, 1931, a white woman, age 36 years, was admitted complaining of pain in the right upper abdomen, radiating to the back between the shoulders. Her illness started suddenly eleven days before admission, lasting three days; she was relieved by taking castor oil. On admission she had severe nausea and vomiting, and was unable to retain any food or liquids. Three days before admission she noticed a rash on her abdomen. The rash disappeared the day of admission. A history was given of diarrhea three years before, lasting for five days. Frequently she had postprandial epigastric pain of a gnawing nature, most marked two or three hours after meals and it was usually relieved by the ingestion of food. Physical examination was negative except for marked tenderness and moderate rigidity in the gallbladder region. Examinations were as follows: W.B.C. 15,800, R.B.C. 3,800,000, Hb. 70 per cent. There was an eosinophilia of 60 per cent. Gastric analysis was normal, as were the gastrointestinal series, gallbladder visualization and the roentgenograms of the chest. Her vomiting and nausea continued and she had irregular fever with maximum elevations to 101 degrees. Warm stools were examined daily and on the eighth day *Amoeba histolytica* and cysts were found. In two of these examinations the

rhabditi form larva of the *Strongyloides stercoralis* were found in association with the amoeba. This is the only one of our stool positive cases in which Craig's test was negative.

She was given a grain of emetine hydrochloride intravenously daily for ten days, at the end of which time all pain and tenderness had disappeared. Examinations of the stools were negative for amoeba after treatment. We have recently seen this patient. She has gained twenty pounds and is free from gastrointestinal symptoms. Her stools are still negative for *Amoeba histolytica*. Her differential count still shows an eosinophilia of 35 per cent. Another complement fixation test at this time was reported negative.

The following case presented much difficulty in diagnosis and at first was thought to be malaria. A negress, 43 years of age was admitted on September 21, 1931 complaining that since September 18, 1931, she had headaches with a chill and fever every day, and much weakness with night sweats. She gave a history of having had malaria when a child. There were no present or previous gastrointestinal symptoms. Physical examination revealed marked dehydration, emaciation, and clouding of the sensorium. The edge of the liver which was sharp and regular was palpable four finger-breadths below the right costal border. The spleen, with a smooth margin, was palpable two finger-breadths below the costal margin, and there was general adenopathy. There was a macular eruption present on the arms and legs which disappeared in three days without treatment. The routine laboratory examinations, including the Wassermann test and blood examinations for malaria, were negative. On admission the examination of the blood smear revealed an eosinophilia of 4 per cent. For eight days she had afternoon chills followed by an elevation of temperature to 102 to 103 degrees. The patient received our routine treatment for malaria for six days without any change in her symptoms. At this time a differential leucocyte count revealed an eosinophilia of 16 per cent. On the same day a roentgenogram of the chest reported: "Left diaphragm smooth. At the mesial border of the right diaphragm there is an oval density 5 cms. in length. Possible liver abscess. The lungs were clear." A fluoroscopic examination confirmed the above and showed this density to be well forward. This report, with the eosinophilia, prompted us to search again for intestinal parasites and the examination of a warm saline enema revealed many motile *Amoeba histolytica* and *trichomonas hominis*. A pneumo-peritoneum was produced by the injection of a liter of air. The roentgenographic report was: "Right diaphragm and liver in vertical position. The diaphragm is displaced upward two inches from the liver. The diaphragm is irregular, double arched and the dome of the liver shows the same contour. No subdiaphragmatic abscess." The complement fixation test for amoeba was reported positive. She was given one grain of

emetine hydrochloride intravenously daily for ten days. After the first injection the temperature became normal and remained so throughout her stay in the hospital. Two weeks later she had a 3 per cent eosinophilia and the stools were negative for endamoeba histolytica.

This next patient was brought into the hospital in shock; with a history from her relatives that she had been sick about four weeks with fever. A few hours before admission she had a sudden hemorrhage from the bowels. Our first impression was typhoid fever. The patient gradually improved under symptomatic treatment. Physical examination revealed an emaciated, dehydrated negress about 20 years of age, lying in bed in a semi-conscious state. The mucous membranes were pale. An examination of the blood showed W.B.C. 5,600, R.B.C. 2,200,000 Hb. 30 per cent with 2 per cent eosinophiles. Two days later we obtained a history from the patient that she had a diarrhea for the past four weeks, but no blood or mucus was present in the stools. Three days after her admission pathogenic amoeba and trichomonas hominis were found in the stool. For five days the temperature varied from 101 to 102 degrees. Beginning July 13 the patient was given one grain of emetine hydrochloride intravenously daily. Following the fourth injection she had a sudden rise of temperature to 104.8 degrees, with a pulse of 120. This was soon followed by a marked lethargy. She was given a tepid sponge and 250 cc. of 20 per cent glucose intravenously, after which she showed some improvement. The next day the temperature was 106 degrees but she stated that she felt quite well. For the following ten days the temperature varied from 104 to 106 degrees, with the pulse from 100 to 120. Five stool cultures were reported negative for the typhoid group, while the urine was reported sterile. Three blood cultures were sterile and two Widal reactions for the typhoid group were reported negative. The complement fixation test for amoeba was positive.

After ten days the temperature gradually declined and two weeks later was 100 degrees. Due to the above reaction the emetine medication was discontinued. It was three weeks before anayodin was obtainable. As soon as the anayodin was obtained we began treatment. She was given eight grains by mouth three times daily. The temperature promptly dropped to normal and remained there throughout her stay in the hospital. At the end of the treatment the complement fixation test was negative.

Treatment: Many drugs have been advocated for the treatment of amoebiasis, a fact which immediately makes one suspicious of their efficacy. These drugs may be classified as follows: (1) Ipecac and its components, such as emetine and cephaline; (2) the halogenated oxyquinolines; (3) the organic arsenicals, such as stovarsol and the newly recommended "carbasones"¹¹ and (4) a miscellaneous group, such as the alkyl resorcinols and bismuth compounds.

The treatment of our patients consisted of one grain of emetine hydrochloride intravenously for ten days. Most writers recommend subcutaneous and intramus-

cular injection, but these are quite painful and we have never had any untoward reaction from its intravenous use. We give one grain diluted to 10 cc. with physiological salt solution. This is followed by a course of anayodin. The usual treatment consists of 16 grains three times a day by mouth over a period of 10 days and in refractory cases a 250 cc. enema of 2 per cent anayodin, especially where the ulcers are in the lower portion of the colon, since the drug is supposed to act by direct contact with the amoeba.

Anayodin is iodoxyquinolin sulphonic acid with the addition of 22 per cent sodium bicarbonate, the latter being added merely to increase its solubility. Anayodin¹² contains about 28 per cent iodine, which is firmly fixed, there being no free iodine in the pills which contain 4 grains of the drug and, therefore, about nine-tenths of a grain of iodine. Anayodin, aside from producing or increasing a diarrhea, is non-toxic in the recommended dose and no ill effects have been reported from its use.

Emetine is not without danger, but when cautiously administered is quite useful. Cases of peripheral neuritis have been reported and it too may set up a diarrhea. Emetine is a depressant to the heart and sudden death has been reported following its use, but if one gives only one grain daily in well diluted solutions, gives it slowly and does not exceed 10 grains in as many days, there will be no untoward results. Treatment, however, should not be repeated within six to eight weeks because emetine is eliminated very slowly.

TABLE NO. 1

Average blood Picture of 71 patients:			<i>Extremes</i>
W.B.C.	10,320	4,200 to 33,000	
R.B.C.	3,820,000	1,200,000 to 5,200,000	
Hb.	65%	16 to 100%	
P.M.N.	63%	30 to 80%	
S.L.	22%	6 to 50%	
L.L.	9%	0 to 8%	
Trans.	3%	0 to 8%	
Eos.	3%	0 to 60%	

TABLE NO. 2

Average gastric analyses of 9 patients:			<i>Extremes</i>
Free Hcl.	30°	8 to 56°	
Total Acidity	51°	26 to 84°	
Average contents removed	43 c.c.	15 to 70 c.c.	

TABLE NO. 3

Parasites associated with the amoeba in the stools:	
Chilomastix mesnili	4
Trichomonas hominis	4
Trichuris trichiura	1
Strongyloides stercoralis	1

Endamoeba nana	1
Necator americanis	1
Hymenolepis nana	1

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DISCUSSION ON PAPER OF DRS. ROSEN
AND THOMAS, JR.

Dr. V. P. Sydenstricker, Augusta: The last case of Dr. Rosen's was of interest in regard to the fever. I have spoken of amebiasis before this association previously, and still feel that if we look carefully we will find many more cases. We have always stressed the association of psychoneurosis with amebiasis, for many individuals have been found to have this disorder and have been found curable by treatment for it. Patients with mucous colitis should be under suspicion. Not all are victims of this disease, but many are and those who are can be cured much more easily. I think just as in tuberculosis the positive findings will vary directly with the number of stools examined, and it may take ten to eighteen days to demonstrate the parasite. Waiting for dysentery is useless.

In the diagnosis saline enemas will be of great assistance. The organisms can be seen quite distinctly as red or pink staining bodies. For those more experienced the hemotoxylin-eosin stain specimen can be demonstrated very beautifully, but I think it requires some experience.

As to treatment, I think we cannot say that we have a specific. It has been the experience of all who have used anayodin that it has been more successful than emetine. Emetine not uncommonly produces neuritis and other unfavorable symptoms and our conviction is that emetine is no more dangerous given intravenously than intramuscularly. The arsenicals are good but they are toxic and many persons treated with stovarsal developed symptoms not infrequently seen after arsphe-namine. Ipecac is rarely used in this country but removes the symptoms overnight. It is not easy to

take. You are all familiar with the difficulty of administering the old ipecac in the old coated pills, but it can be made into a suspension and administered through a duodenal tube with practically no nausea, and it is extremely efficacious.

Dr. S. F. Rosen, Augusta, (closing): I wish to thank Dr. Sydenstricker for his discussion. The patient who had the severe reaction following emetine improved rapidly following the administration of anayodin. If there are any untoward reactions from emetine, it is well to use this drug.

I wish to call attention to the danger of using any arsenical preparations when a hepatitis is present. Because arsenicals are highly recommended by some writers in treating amoebic dysentery, we treated six cases with stovarsal and two cases of dermatitis developed. There is a new arsenical preparation called carbasone which is highly recommended, but we have had no experience with this drug. Its advocates, however, caution that optic atrophy may ensue.

A suitable way of obtaining material for study, is giving a warm saline, never a soap-sud, enema. It is well to withhold the bismuth administrations until the amoeba are found in the stools because this drug inhibits their activity.

SUTURE OF BRACHIAL ARTERY

Report of Case

ENOCH CALLAWAY, M.D.

LaGrange

J. H. M., Jr., aged 8, was brought to the hospital by Dr. W. R. McCall. While pushing on a door the glass had broken and he had received an incised wound just above the elbow which had completely severed the brachial artery. The hand and forearm were cold and lifeless and there was apparently no circulation in the hand or lower two-thirds of the arm. The recurrent ulnar and radial arteries, which normally furnish a plentiful collateral circulation, were either absent or so small that they were of little use.

Dr. McCall, realizing the situation, had controlled the hemorrhage by grasping the tissue near the artery with a small hemostat and applying traction. He thus preserved the cut end of the artery from trauma and also preserved any possible collateral arteries from damage by the pressure of a tourniquet.

Using a special paraffined silk suture in a very fine needle, as recommended by Dr. Rudolph Matas, an end to end anastomosis of the cut artery was performed. The radial pulse immediately returned and the limb resumed its normal appearance. The wound was closed and the arm was put up in a right angle splint. His convalescence was uneventful.

This case is interesting on account of the small size of the artery involved and also because the usual collateral circulation failed to function.

CLINICAL CASE REPORTS

AORTIC REGURGITATION

Case Report No. 3

MEDICAL DIVISION, GRADY HOSPITAL
AtlantaEMORY UNIVERSITY SCHOOL OF MEDICINE
EMORY UNIVERSITY

A negro man, age 46 years, was first admitted to the Emory Division of Grady Hospital, April 15, 1932, and discharged April 26, 1932. His second admission was August 24, 1932, and he died August 26, 1932.

Present Illness.—At his first admission he complained of dizziness, headache, and shortness of breath. He had been in good health until December, 1931, when, while doing heavy work, he suddenly became short of breath and lost his power of speech. A physician who treated him at this time diagnosed his disease as high blood pressure. After remaining in bed two weeks he felt better. His dyspnea disappeared and his speech returned. Since February, 1932, he has suffered with marked cardiac palpitation and has had a return of shortness of breath which has steadily gotten worse. There has been some slight substernal oppression but no acute pain. His dizziness seems to be associated with severe headaches. The headaches are generalized, occur almost daily, and are not associated with nausea or vomiting. There have been no convulsive seizures or periods of unconsciousness. There has been some slight cough, productive in character. All of the above symptoms have been greatly exaggerated on exertion.

History.—There is a definite history of a penile lesion at the age of 22 years. About this time he had polyarticular rheumatism with remissions and exacerbations lasting for four or five years. In 1931 he had a traumatic injury to his head but no fracture. He has had no antiluetic therapy. Two weeks before his last admission to the hospital he became dizzy, fell in the fire and burned both of his hands.

Physical examination revealed an adult colored male, approximately 6 feet, 7 inches tall, weighing 200 pounds, with a large bony framework, propped up in bed, with slight respiratory distress. There was moderate retinal arteriosclerosis. Pronounced pulsation of all of the vessels of the neck. Numerous fine rales at the base of both lungs. The heart was tremendously enlarged, the apex being in the sixth intercostal space 11.5 cm. from the midsternal line. The beat was forceful and thrusting in character. There was a definite systolic retraction of the skin in the seventh interspace in the anterior axillary line and in the eleventh and twelfth interspaces posteriorly. The heart shifts very slightly with change of position. A systolic thrill is best felt in the fourth left interspace over the nipple but it is also felt almost over the entire precordium. The percussed area of heart dullness is 12 cm. to the left in the sixth interspace, 6 cm. to the right in the fourth interspace. The retromanu-

brial dullness is 6 cm. in the first interspace. The first heart sound at the apex is quite loud and snapping, followed by a soft blowing systolic murmur. The second sound is distinctly high pitched and followed by a distinct rumbling diastolic murmur. Over the aortic area there is a very loud, to and fro murmur, which is transmitted to the vessels of the neck. The pulse is slow and irregular, Corrigan in type, no deficit. The radial and brachial arteries are easily felt. Blood pressure 210/60 in the right arm, 240/80 in the left. The blood Wassermann reaction is negative. Abdominal examination is negative. There is no edema of the lower extremities, and the reflexes are normal.

Course.—Under rest in bed, careful dieting, and digitalis he improved greatly and was sent home to continue the treatment. He remained at home until the early part of August when his former symptoms reappeared with greater severity. On the second admission to the hospital the physical signs were practically the same except there was an extreme degree of congestive heart failure, from which he did not rally. This patient died because of congestive heart failure resulting from chronic cardiac valvular disease.

Dr. J. E. Paullin: Certain points of interest regarding his heart disease are to be discussed. Is the valvular heart disease the result of a previous rheumatic fever or is it the result of syphilis? The patient's age of 46 years could fit into either group, although in this race, because of his age alone, he would more than likely be classed as syphilitic; further than this he has lived less than one year after the onset of his first evidence of failure, which is observed more frequently in patients with syphilitic heart disease; there is a history of a penile lesion occurring at the age of 22 years, which was without any antiluetic treatment; his blood Wassermann is negative, there is no evidence from physical examination or x-ray of any aortic dilatation.

Against the assumption of luetic heart disease is the fact that the patient had definite attacks of disabling polyarthritis shortly after he had his penile lesion. The electrocardiogram shows a slow auricular fibrillation, a condition occurring with greater frequency in rheumatic heart disease; clinically there is evidence of disease of the mitral valve as well as the aortic and despite the absence of a distinct presystolic murmur, the loud snapping first sound with accentuation of the second pulmonic is very suggestive of mitral stenosis. There is tremendous cardiac hypertrophy and dilatation and suggestive signs of an adherent pericardium. The adherent pericardium might account for some of the cardiac hypertrophy, on the other hand with a heart so large as this, retraction of the interspaces occurs when the pericardium is not adherent.

What part does hypertension play in this patient? From the record it would seem that along with his valvular disease he developed hypertension and that in the beginning most of his symptoms came from his hypertension, (dizziness, headaches, loss of speech, cerebral vascular crisis, and substernal oppression)

rather than from heart failure. Therefore, because of auricular fibrillation and mitral stenosis, the etiologic factor in the causation of this patient's heart disease is most likely rheumatic.

Dr. Paullin's Clinical Diagnoses:

1. Rheumatic heart disease, mitral stenosis and insufficiency; aortic insufficiency.
2. Cardiac hypertrophy and dilatation.
3. Possible adherent pericardium (doubtful).
4. Hypertension with arteriosclerosis.
5. Congestive heart failure with general anasarca.

Dr. J. C. Norris, Pathologist:

There is general edema of the lower extremities. The peritoneal cavity contains a considerable amount of free fluid. Pleural cavities obliterated by dense fibrous adhesions. There is marked passive congestion of the lungs. Pericardial cavity is obliterated by adhesions which were fairly easily broken up by the finger. The heart weighs 1070 Gm. and fills a large part of the thoracic cavity. There are small petechial hemorrhages into the epicardium of both ventricles. There is marked enlargement and thickening of the left auricle. The mitral orifice is greatly narrowed. The valve leaflets are markedly thickened, nodular, and scarred. Beneath the leaflets there are two rather large calcified nodules about 1 cm. in diameter. One of these calcified areas is exposed so that a small ulceration has taken place through the valve leaflet. There is tremendous enlargement of both the right and left ventricles. Aortic valve edges are thickened and rolled and slightly matted together. A few atheromatous plaques are observed in the aorta. The coronary arteries are apparently normal. There is chronic passive congestion of the liver, of the spleen, and the kidneys.

Dr. Norris' Anatomic Diagnoses

1. Chronic rheumatic heart disease, hypertrophy and dilatation of the heart. Chronic adherent pericardium.
2. Chronic rheumatic valvulitis of the aortic and mitral valves, mitral stenosis and atheroma.
3. Edema and congestion of the lungs.
4. Chronic passive congestion of the liver and kidneys.

PRELIMINARY ANNOUNCEMENT

The American Express Company will operate a special tour to the Pacific Northwest, Canadian Rockies and California; also optional return trip via Chicago to visit the Century of Progress, Niagara Falls and New York in connection with American Medical Association convention, to be held in Milwaukee, Wis., June 12th to 16th, 1933. Detailed itineraries and rates will be announced. Inquiries will be welcomed by American Express, Atlanta office, or by Dr. Allen H. Bunce, 139 Forrest Avenue, N.E., Atlanta. Main tour to be operated on a conducted basis in special Pullman cars provided fifteen members book for the main tour. Your assistance in making this movement a huge success is earnestly solicited.

THE TREATMENT OF ABORTIONS*

PHILIP R. STEWART, M.D.
Monroe

Since abortions are frequent and the sequelae often serious, a review of the pathology and mechanism would seem worth while, in order that a more rational treatment might be generally agreed upon.

Definition. Abortion is generally accepted as meaning an interruption of pregnancy before the period of viability, that is, before the twenty-sixth week. From the twenty-sixth week to term an interruption of pregnancy is called a premature labor.

Incidence. The incidence of abortion is variously estimated by different authors at between 12.5 and 24 per cent of all pregnancies. Of course these are hospital statistics and I do not believe these figures would hold true in general practice in our locality.

Etiology. The cause of abortions may be divided into three general classes: fetal, maternal and paternal.

Fetal Causes. Of the fetal causes, the chief is the low vitality and death of the fetus. This is largely due to congenital anomaly, a recent study showing the incidence of developmental cardiac defects to be six times as frequent in aborted fetuses as they are in the population at large. The other causes of a defective ovum would be secondary to the maternal and paternal causes which effect a lowering of germinal vitality. The chief of these are syphilis, chronic alcoholism, lead and phosphorus poisoning, anemia, excessive coitus, general debility and endocrine disorders.

Other causes within the fetus itself are hydatidiform degeneration, placenta praevia, abruptio placenta, stenosis or knotting of the cord, polyhydramnios and oligohydramnios with its resultant adhesions.

Maternal Causes. The maternal causes are:

1. Criminal interference.
2. Acute gonorrhea, salpingitis and appendicitis.
3. Malformation or disease of the uterus, as infantile, bicornuate or fibroid uterus, chronic endometritis, polyps, lacerated cervix and retroversion.
4. Acute infectious diseases of the mother.
5. Infection with the *Bacillus Abortus*.
6. Any constitutional disease which mark-

*Read before the Eighth District Medical Society, Madison, Ga., August 10, 1932.

edly lowers the mother's vitality such as advanced tuberculosis, chronic nephritis, heart disease, diabetes, anemia, or hypothyroidism.

Type of Abortions

Cases of abortions may be divided into four clinical types.

1. Threatened abortion.
2. Inevitable abortion or abortion in progress.
3. Incomplete abortion.
4. Infected abortion.

Endometrial Changes

Before we consider the mechanism of abortion let us first briefly review the development of the decidua and placenta since in abortion these are the structures which give us the chief concern. The fetus is usually expelled spontaneously, but it is the retained placenta and decidua which produce hemorrhage and invite infection. Therefore, a study of their growth and the mechanism of their normal expulsion will aid in determining the method of choice in treating the abnormal case.

The endometrium of the pregnant uterus is composed of four layers, the epithelial layer, the compact layer, the spongy layer and the unaltered layer.

The epithelial layer soon loses most of its cells as the ovum grows and is represented by only occasional cells over the surface.

The compact layer grows in density and becomes more friable up to the third month, from which time on to term it becomes thinner and by the sixth or seventh month has adhered to the chorion and is only a few millimeters thick.

The spongy layer consists of a lacy network of glands and little fibrous tissue. As pregnancy progresses this layer becomes progressively more friable and it is at this level that the decidua normally separates from the uterus at term, the epithelial and compact layers being adherent to the outer surface of the chorion.

The placenta attains form between the sixth and ninth week. By the fourth month it fills half of the uterus. At term, it fills one fourth to one third of the uterus.

The Mechanism of Abortion

The method of expulsion of the fetus depends largely on the stage of pregnancy.

1. The powers.

In all cases the fetus is expelled from the uterus by uterine contractions. The expulsion from the vagina is accomplished by the abdominal muscles.

2. The passages.

The passages offer no difficulty, as the fetus is

small. Occasionally, however, the cervix is very slow dilating, due to scar tissue from previous lacerations.

3. The passengers.

The passengers are the most important, and of these the placenta and membranes give the most difficulty. Usually the fetus, if sufficient patience is exercised, will be expelled spontaneously.

In the first eight weeks the ovum is small and poorly attached and slips out fairly easily. At this time the decidua are thick, vascular and friable and separate with difficulty, producing hemorrhage.

From the ninth to the twentieth week the placenta plays the chief part, as it is relatively very large at this time. It is failure of ready separation and expulsion of the placenta then that causes most of the hemorrhage.

From the twentieth week to term the fetus is the chief passenger and the mechanism is that of a miniature labor, with the difference that abnormal positions and presentations are much more common due to the relative disproportion between the fetus and the passages.

Diagnosis

Any woman in the child-bearing age, whose periods are usually regular, who misses a period and has a uterine hemorrhage should be treated as an abortion until proven otherwise. The question to be answered is, "Does a normal pregnancy exist, and is the uterus attempting to terminate it?"

When a pregnancy is known to exist the diagnosis is much simpler.

Conditions to be differentiated from abortion are the following: hemorrhage from a fibroid uterus, chronic metritis, ectopic pregnancy, cervical erosions, malignancies and hydatidiform mole.

Diagnosis of the Clinical Types and Treatment of Each

1. Threatened abortion.

A pregnancy is known to exist and there are drawing pains and bleeding, which may be little or much. However, examination reveals that the cervix is not dilated or dilated very little, and the condition does not progress. Sometimes this condition will persist for weeks and stop, the pregnancy going on to term normally. These cases should be put to bed, the foot of the bed elevated and morphine given to quiet the pains. As soon as the bleeding stops the bed may be lowered and the patient allowed up slowly. At times these cases persist and go on to inevitable abortion.

2. Inevitable abortion.

In inevitable abortion the hemorrhage is

usually profuse and the pains more severe and more regular, simulating labor pains. Examination reveals a dilatation and a shortening of the cervix.

Frequently these patients will come through well with expectant treatment. Once it is determined that the abortion is inevitable the patient should be given fluid extract of ergot, one dram every four hours for six or eight doses, and an ice-cap kept continually to the low abdomen and let alone. She will usually expel the fetus and placenta into the vagina and it can be easily lifted out with the sponge forceps.

If this does not cause the expulsion of the fetus, the patient should be shaved, bathed with bichloride solution or iodine and the cervix and upper vagina packed tightly with sterile gauze and the lower vagina packed loosely with cotton. This pack should be left in twelve to twenty-four hours. Usually the pains will start up at once. If not, give a cubic centimeter of pituitrin hypodermically and three grains of quinine every three hours. At the end of twenty-four hours remove the pack and the uterine contents will usually be found in the vagina where they may be easily lifted out. If not, repeat the pack for another twenty-four hours. It is at this point that the question of curetment arises.

The question is when to use the curette and when not to use it.

The purpose of the curette is to empty the uterus of the secundines and thereby stop hemorrhage and avoid infection. If the uterus is empty and there is no hemorrhage there is no indication for a curetment.

It is common sense reasoning that curetment opens up channels for infection and offers a chance for the introduction of pathogenic organisms, and the indications should be clear to justify its use. Perforations of the uterus, usually in the lower uterine segment, is not an infrequent occurrence, even in the best hands. We all know, too, that curetment may be easily performed but frequently the woman's health is impaired for years to come. Even though the curettage produces anatomically perfect results, there is often a psychic trauma from which the patient never recovers, resulting in all grades of nervous manifestations, even at times in a psychosis.

Let us then consider what forms a clear indication for curetment. As pointed out earlier, up to the third month the decidua are thick, vascular and friable. As a result, abortion before the third month results in retention of the decidua and hemorrhage. Therefore, curetment is usually necessary to

empty the uterus completely. After the fourteenth week (three and a half months) the curetan has no place, according to Polak, and with this I agree. After this time the only indication for curetment is for the purpose of obtaining a specimen in a suspected chorio-epithelioma.

3. Incomplete abortion.

The diagnosis of an incomplete abortion rests on the knowledge that the patient has passed some of the products of conception. Usually the cervix is wide open and frequently part of the ovum is in the cervix or vagina, either the fetus or placenta. When the cervix is tightly closed one should hesitate ever to make a diagnosis of an incomplete abortion.

The treatment of an incomplete abortion depends upon the stage of pregnancy. In the first eight weeks the procedure of choice is light curetment followed by insertion of a strip of gauze saturated with a weak iodine solution, removing this, and packing the uterus with a strip of iodoform gauze. The patient is given one dram of ergot every four hours for six doses and an ice-cap is placed on the lower abdomen. The iodoform gauze is removed in twenty-four hours and the patient can usually be up in ten or twelve days.

I do not believe we are justified in forcibly dilating a tightly closed cervix to curette for a supposed incomplete abortion. If the hemorrhage is severe enough to justify interference, then the cervix and upper vagina should be packed tightly and the patient given quinine and pituitrin until the pains dilate the cervix at least 1.5 cm. After this the cervix may be carefully dilated and the uterus emptied.

From the eighth to the twelfth week the procedure of choice is to clean out the uterus with the finger, holding the uterus through the abdomen with the free hand. After separating the membranes they can be easily removed with the sponge forceps, being sure to rotate the forceps as they are being closed to prevent the possibility of grasping the uterine wall and pulling it out. This is not an uncommon error: at times even pieces of ileum are pulled out through the vagina.

After removing all possible with the sponge forceps, a light curetment should be done and the uterus packed with iodoform gauze as before.

From the fourth month on, all that should be necessary is the removal of as much placenta as possible with the sponge forceps, pack the uterine cavity with iodoform gauze

if hemorrhage continues, and use ergot and the ice-cap.

After the third month the fetus has attained sufficient size to produce pains enough for its expulsion and is capable of dilating the cervix. Therefore, if the woman is bleeding and the fetus is still in the uterus, pack the cervix and vagina, give quinine and pituitrin and allow the pains to dilate the cervix and expel the fetus. In this way we may frequently save time as well as prevent the possibility of leaving part of the fetus in the uterine cavity. When a leg or more frequently the head is retained, we are in a worse fix than when we started. Therefore, I say give nature a chance to expel as much as she will, and then remove any of the membranes that may be retained.

After the fourth month the mechanism of abortion is that of a miniature labor, and as we would not do a routine curetment after a full term labor, neither should we do a routine curetment after the fourth month.

4. Infected abortions.

These are usually criminally induced, though not necessarily so. These should be treated with the same conservatism as is used in the treatment of streptococcic infections elsewhere. All the supportive measures should be employed, frequent small blood transfusions offering the greatest aid. The patient should be kept in Fowler's position and an ice bag constantly to the low abdomen. Ergot and pituitrin should be given, and if on speculum examination any part of the ovum is presenting in the vagina or cervix it should be very gently lifted out with the sponge forceps, and that is all. Frequently intramuscular injection of polyvalent antistreptococcic serum is of value and should be used.

After the signs of sepsis have subsided a cleaning of the uterine cavity with the sponge forceps may be done, but I am of the opinion that once a woman has conquered a streptococcic infection we will do well to let the uterus empty itself, rather than run the risk of opening up new channels for infection.

I will say in closing that my training in school was to treat all abortions conservatively and none was curetted without special indications. My later hospital training was done where all abortions were curetted on arrival. My conclusions are based on my observations after having vigorously followed both extremes.

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MATERNAL MORTALITY IN GEORGIA*

S. S. SMITH, M.D.

Athens

About three weeks ago I attended the Parent-Teacher Association Convention in Athens. I was pleasantly surprised to see how much they were aroused over the maternal and infant mortality in our great state. A lady spoke twice on this subject and both men and women showed that they were very much interested. I made up my mind that we must take the lead or soon we will be forced to follow. There is no need to wait for the Parent-Teacher Associations to act. This problem should be solved by the doctors.

It is very humiliating to most of us to read statistics of maternal deaths from other civilized countries and find that the United States is about the worst country of all for a woman in childbirth. The average in the United States to every 10,000 live births is 65 maternal deaths. In Georgia to every 10,000 live births, 100 mothers pay the death penalty. De Lee says that no one can tell how many women die of childbirth, as many maternal deaths are assigned to other causes. I believe that many are buried with a mistaken diagnosis or willful concealment.

In England and Wales for the last 20 years there has been a gradual rise in the maternal death rate from 40 per 10,000 live births to 43 per 10,000 live births. This caused the English Ministry of Health in 1931 to publish an extended report of a special investigating committee. It seems they were deeply concerned over the high death rate and suggested tightening up on the supervision of obstetrics. I believe strict obstetric supervision in Georgia would lower maternal mortality 50 per cent within 12 months, by showing some of us who are causing this disgrace that we are wrong in thinking we are obstetricians.

De Lee says, "Twenty-five thousand women die annually in the United States during childbirth; 6,000 die from infection, 5,000 from eclampsia, 4,000 from hemorrhage, of

*Read before the Eighth District Medical Society, Madison, Ga., August 10, 1932.

the immense number of wounded we can form no estimate. That a large part of all this misery is preventable, is the universal opinion of those who have studied the situation. Why is it not prevented?"

Levake says "the importance of prenatal and maternal care under skilled direction, with emphasis on conservative obstetrics in contradistinction to operative furor, is strikingly brought by Dublin, who shows that such care results in the reduction of maternal mortality from 7 to 2 per thousand confinements."

Watkins and De Lee, in describing conditions in Germany, said, "during the war there were more spontaneous births and fewer operative deliveries than formally. Furthermore, complete laceration and bladder fistulas almost disappeared. These facts may be attributed to the absence of physicians and hence to the absence of premature interference with the process of labor."

Recently in London, England, the medical authorities seemed to think there was too much interference in childbirth, and that a large part of it was unnecessary and meddlesome. They also thought that cesarean section was often done unnecessarily. What would they think of us?

Levake said, "out of every 100 women dying as the result of pregnancy, approximately 50 per cent will die of sepsis, postpartum or postabortion. Twenty-five per cent will die of toxemia, pernicious vomiting or eclampsia. Fifteen per cent will die of hemorrhage, ectopic pregnancy, placenta previa, accidental, postpartum, rupture of the uterus or abortion. Seven per cent will die as the direct outcome of tuberculosis, heart disease and diabetes. Three per cent will die of complications such as embolus, pneumonia, etc."

Sepsis, toxemia, meddlesome interference and hemorrhage cause about 90 per cent of maternal deaths, and these properly managed would reduce the maternal mortality 65 to 75 per cent.

We should make no vaginal examinations, but abdominal and rectal instead unless interference is indicated. Accord the mother the same care in preparation you would the

father for perineal or bladder surgery. Who would deny her that? This alone would greatly reduce maternal mortality.

Prenatal care is essential to good obstetrics. Examine your patients every two or three weeks or oftener if necessary. We are interfering too much; there are too many forceps deliveries, versions, cesareans, and other manipulations.

De Lee says "much has been said about doctors interfering too much in normal labor and sad to say, it is true. The maternal and fetal mortality in the United States is too high and the doctors are in part responsible for it. In the early days it was due to ignorance; now it is due as much to unwarranted operations as to actual ignorance, perhaps more. What does this mean? Why do doctors perform unnecessary operations? Why do they give pituitary to hurry normal labor? Don't you think something should be done about it? By whom? The doctors? Or the public? Or the state? And what?"

At the Savannah meeting of the Medical Association of Georgia, a committee was appointed, by the president of the association, for the study of maternal and infant mortality. This work will be promoted by the association.

"The White House Conference is over and the reports of its meetings are being filed away for future study by those who are sufficiently interested in the subject. The cheering is over, as it were. We wonder if those in authority will heed the valuable and practical suggestions offered, and see that they are made effective. We fear that it will result in causing a lot of talk at one time, printed pamphlets on dusty shelves, and that one day, in the distant future, some one will discover the obstetric maternal mortality in the United States is a disgrace to any civilized nation—and start the agitation all over again. We base our pessimism on 'water that has gone over the dam.'"

I do not believe such a thing will happen in Georgia with 100 per cent of the women, and 85 or 90 per cent of the doctors favoring the movement to reduce maternal and infant mortality.

BIRTH CONTROL*

S. R. MITCHELL, M.D.
Pineview

The subject of birth control is a delicate one and we of the medical profession are inclined to hold our peace until goaded into utterance by the attitude of the public. Our people are discussing it and practicing it and it is high time for us to declare our stand for or against it.

Some of the Protestant denominations are in favor of birth control and wish to legalize it, but the Catholic Church is strictly opposed to it. In this fast age there are so few women who want to be mothers and so few men who wish to be fathers that the situation is becoming alarming. The secrets of birth control are becoming generally known and as a result more young girls are being seduced than ever before. When young married folks can set the gauge upon pregnancy and child bearing their virtue will soon become destroyed.

The class of people who are practicing birth control are those of the middle and wealthy classes, the very people who should have relatively large families because they are able financially to rear and properly educate them. In a few generations we will be a retrograde people if something is not done about it.

At present we have no real statesmen in our land to lead us through this awful depression and uphold the venerable principles of our forefathers. Even the Gospel will suffer for want of men with strong courage to stand up for the truth. Some of our women will not deny the gay life of society long enough to become mothers. If one should become pregnant she tries to abort it at once and if she fails to accomplish this the child is born into a world where it is not wanted.

When you of our noble profession are consulted by a young married woman who is or thinks she is pregnant, keep the faith and refuse to attempt to abort the pregnancy. Conception should be prevented or pregnancy aborted only when the life of the mother or the child is threatened.

*Read before the Wilcox County Medical Society, Abbeville, Ga., December 22, 1932.

The Medical Association of Georgia will hold its Eighty-Fourth Annual Session at Macon, May 9, 10, 11, 12. Hotel Dempsey will be headquarters. All meetings of the Council, House of Delegates and scientific program will be held on the mezzanine floor. All commercial and scientific exhibits will be in the foyer on the same floor.

All meetings and entertainments will be featured by the loyalty and hospitality which have characterized many former meetings in Macon and the birth of the Association there in 1849.

Ample hotel facilities will be provided for all who may attend.

ARACHNOIDISM

Case Report

WM. A. WALKER, M.D.
Cairo

I was very much interested in the report of a case of spider bite by Dr. H. M. Tolleson, of Hahira, Ga. The doctor gave a very accurate and classic description of the symptoms suffered by these patients.

During the past forty-four years it has fallen to me to treat fourteen cases of spider bite. I have observed that many of these patients suffered more rigid cramps and agonizing pains in the muscles of the abdomen, chest and back, than indicated in the description which Dr. Tolleson gave. In fact, most of my patients screamed aloud with cramp-like pains. Several patients had very difficult breathing because of the spastic and unrelaxing condition of the thoracic muscles.

I did not keep any record of my patients but I remember each case individually. The *Lactrodectus Mactans*, or black widow spider, so called because the female, immediately after becoming fertilized, kills and eats her mate, is from one-fourth to one-half inch in diameter and has a red spot in its face. Their usual habitat is abandoned houses and infrequently-used outdoor toilets, but they may be found in almost any locality. Two of my patients were bitten in outdoor toilets.

The first two patients I treated by giving morphine to relieve pain and assumed an expectant attitude. The result was that my patients suffered those unbearable, agonizing pains for four days. After this experience I decided that there was either something radically wrong with my treatment or else spider bite was a much more serious condition than I had been taught to believe. So I decided that should I have another case, instead of damming up the secretions of the body I would try some thorough elimination.

In two or three years I was called to see a woman fifty-five years of age, who weighed one hundred and thirty pounds. She had been bitten five hours previously and was writhing and screaming with pain. I immediately gave her two ounces of alcohol well diluted with water. In fifteen minutes she was entirely free from pain and perfectly relaxed, with a mild form of intoxication. I then gave her one-third of a teacup of magnesium sulphate dissolved in hot water, and administered it all at one dose. In one hour and forty minutes, before the patient fully recovered from the alcoholism, the salts began to act, giving her two very copious movements. By that time she was entirely free from pain and had fully recovered from the effects of the alcohol. She had an uneventful recovery.

So pleased was I with the treatment in this case that without variation I administered it to eleven other patients with equally gratifying results. The last patient was treated in October, 1928. A young farm la-

(Continued on Page 107)

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

MARCH, 1933

THE PREVENTION OF CANCER

To prevent cancer one must understand something of the cell structure of the human body. The body is composed of blood cells, nerve cells, muscle cells, bone cells, fat cells, gland cells and others. The growth and development of all of these cells are greatly influenced by some mechanism, the nature of which we do not know. If this controlling influence is temporarily reduced or totally removed from a portion of any one of the above groups of vital cells, they begin to grow more rapidly than the neighboring cells and in so doing they encroach upon the normal cells and prevent them from functioning properly. Thus we see the beginning of a cancer.

Cancer in some form now causes the death of one woman in every eight who has reached the age of forty. Women who have borne children have a much higher incidence of cancer than those who have not borne children. More than one-third of all cancers in women are found in the uterus and the breasts. Cancer of the cervix of the uterus is twice as common as cancer of the breasts. During 1931 two women died every day in the state of Georgia of cancer of the uterus, chiefly of the cervical portion.

The prevention of cancer in the uterus and breasts is simple and absolute cure is easily accomplished in cases diagnosed early in the disease when a few facts are known and definite action taken. Cancer in these organs usually occurs between the ages of thirty-five and fifty-five. A lump in the breast of a girl, 18 years of age, is usually not a cancer but it should always be removed for it is likely to become a cancer when the girl grows older. Cancerous lumps in the breasts are never painful when they first appear but they may become so late in the disease. A collection of small milk channels in a breast may be mistaken for a cancer. To examine the breast for tumors, the flat of the examiner's hand should be placed firmly

ly against the breast. Any lump which can be felt in this manner should be removed at once. A lump in the breast should never be massaged in the hope that it will go away for if it happens to be a cancer, massage may cause it to break up and spread rapidly to other parts of the body.

Untreated cancer of any part of the body is 100 per cent fatal. During 1931, three women died every week of cancer of the breast in Georgia. Each month you delay in having a cancer removed, the chance of cure is reduced 10 per cent. There is only one way to treat cancer of the breast. The breast should be removed and roentgen ray treatment resorted to after the operation.

Lacerations and other forms of trauma are common during childbirth and cancers frequently occur in these lesions as a result of chronic infection and irritation. Every mother should return to her physician, six weeks after the birth of the baby, for examination of the cervix and the breasts. If abnormalities are found they should be vigorously treated at this time and the patient should return to the physician every six months for re-examination during the remainder of her life.

The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.

Any abnormal discharge or any irregular or excessive menstrual flow calls for an immediate examination of the uterus with a speculum and a good light. If any abnormal condition is found in the cervix of a woman past the child-bearing period, the cervix should be amputated and radium seeds implanted in the stump.

Another common site for the development of a cancer is in the stomach. A palpable tumor in the epigastrium of any person past the age of 40 should be considered a cancer until proved otherwise. Indigestion of not more than two years' duration frequently indicates the presence of a cancer of the stomach. Loss of weight is an important symptom which

should frighten the average person and cause him to seek the advice of a physician.

Cancer of the skin occurs chiefly in two forms. One form is always found above the level of the jaw, usually upon the cheek. This type begins as a simple sore but fails to heal spontaneously and resists the usual treatment for an infected sore. Radium should be used on the face cancers. The other form of skin cancer begins as a black mole and spreads rapidly to the vital organs of the body, resulting inevitably in death. All black moles or other black skin growths should be removed by wide excision as soon as discovered.

Cancer of the tongue or oral cavity may be the result of the chronic irritation produced by jagged, broken teeth, ill-fitting plates, pyorrhea and the excessive use of tobacco.

Cancer of the rectum is rarely diagnosed early. One cause of this is the age-old tendency of the examining physician to examine all parts of the body carefully except the rectum in spite of the fact that such an examination is easily made. Any abnormality found in the rectum upon digital examination calls for an immediate investigation with a proctoscope.

During 1931, cancer in some form killed 1,580 people in our state, and ranked as the sixth cause of death. E. A. B.

STATE BOARD OF HEALTH

The legislature on the final day of the recent session passed a bill to re-establish the State Board of Health. The measure was sponsored by the Medical Association of Georgia, the Georgia State Dental Association and the Retail Druggists Association. The effect of the law is to prevent the political control of public health work in Georgia.

A majority of the members of the State Board of Health will be medical doctors with representatives of the dental profession druggists and laymen. Its members will be appointed by the governor from a list of nominations submitted by the respective associations of each profession, except lay members. Each congressional district will have representation on the Board.

The members of the Board will elect its secretary whose duties will be the same as that of the secretary of the former Board.

This bill passed unanimously and was the only major measure sponsored by the Association to be enacted into a law.

ARACHNOIDISM

Case Report

(Continued from Page 105)

borer, twenty-three years of age, was bitten by a spider while engaged in thrashing peanuts. Six hours later he was brought into the hospital with the usual symptoms. I immediately administered two ounces of alcohol. In twelve minutes he was relaxed and was then given the usual dose of "salts". I directed the nurse that in the event the effect of the alcohol passed off before he had results from the "salts" not to give him more alcohol but to pet him a little until the "salts" acted. This was not necessary. His "salts" acted in less than two hours and he had no more pain. The following day, after taking his breakfast of soft cooked eggs, toast and coffee, he left the hospital in good condition except for intense muscular soreness from the severe cramps and a general weakness from the severe purging.

I believe that in these cases the magnesium sulphate is more than an eliminator. If given in the amount suggested enough of it is probably absorbed to have the same relaxing and paralyzing effect on muscular tissue, that it does when given intravenously.

COUNTIES REPORTING FOR 1933

Macon County Medical Society

The Macon County Medical Society announces the following officers for 1933:

President—Frederick, D. B., Marshallville.
Sec'y.-Treas.—Adams, Thos M., Montezuma.
Delegate—Savage, C. P., Montezuma.

Troup County Medical Society

The Troup County Medical Society announces the following officers for 1933:

President—Herman, E. C., LaGrange.
Vice-President—Williams, C. O., West Point.
Sec'y.-Treas.—Callaway, Enoch, LaGrange.
Delegate—Byrd, M. M., West Point.
Alt. Delegate—Rutland, S. C., LaGrange.

Burke County Medical Society

The Burke County Medical Society announces the following officers for 1933:

President—Bent, H. F., Midville.
Vice-President—McCarver, W. C., Vidette.
Sec'y.-Treas.—Lowe, W. R., Midville.
Delegate—Miller, Robt, L., Waynesboro.
Alt. Delegate—Hillis, W. W., Sardis.
Censors—Bent, H. F., McCarver, W. C., and Lowe, W. R.

SUMTER COUNTY MEDICAL SOCIETY

The Sumter County Medical Society announces the following officers for 1933:

President—Scruggs, S. A., Americus.
Vice-President—Stukes, J. T., Americus.
Secretary-Treasurer—Primrose, A. C., Americus.
Delegate—Chambliss, J. W., Americus.
Alternate Delegate—Smith, H. A., Americus.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

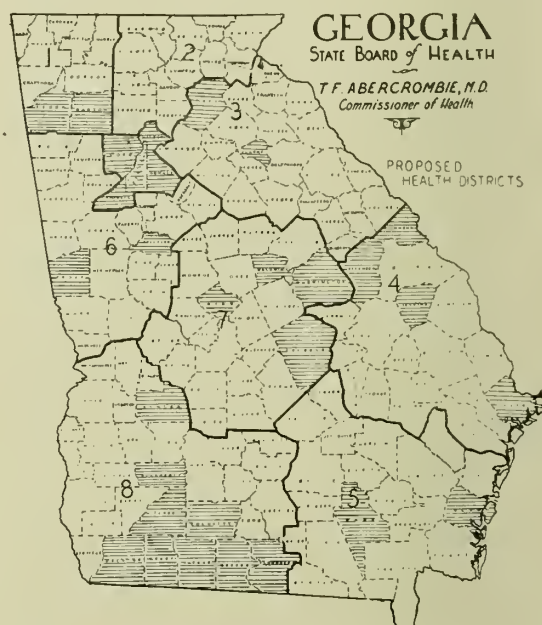
RESULTS ACCOMPLISHED IN COUNTIES OF GEORGIA WITH FULL-TIME HEALTH UNITS

Realizing that a fair comparison could not be made of counties in the northern part of the state with those in the southern part, the state is divided into eight proposed health districts. In this way the comparison is fair to every county and district, as it is made in each district where the same economic conditions are found, the same environmental conditions, and the same diseases are common to each county.

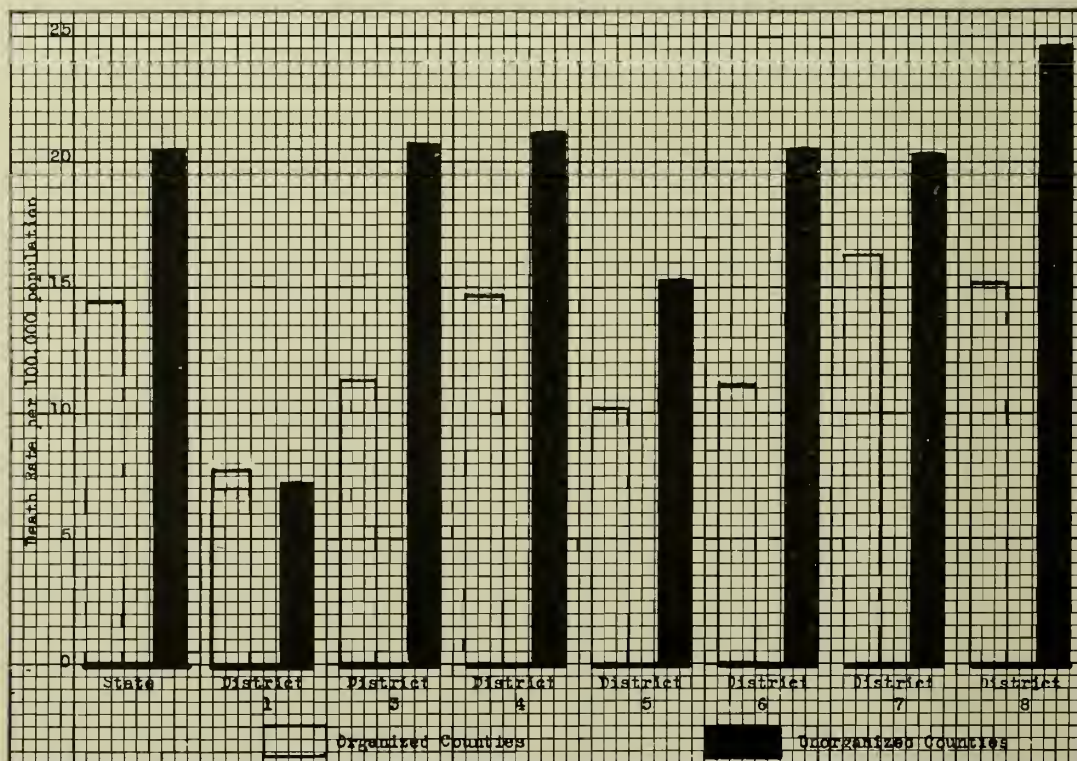
The counties operating full time health units in a district are compared with those counties in the same district without any form of health work. Those counties in the shaded area in each district have had full-time health units for five years or longer. Walker County has operated a full-time health unit for the same period but for the past two years has been included in a new health unit composed of Walker, Dade and Catoosa counties.

Graph 2 shows the typhoid death rate in the state and in each of the proposed eight

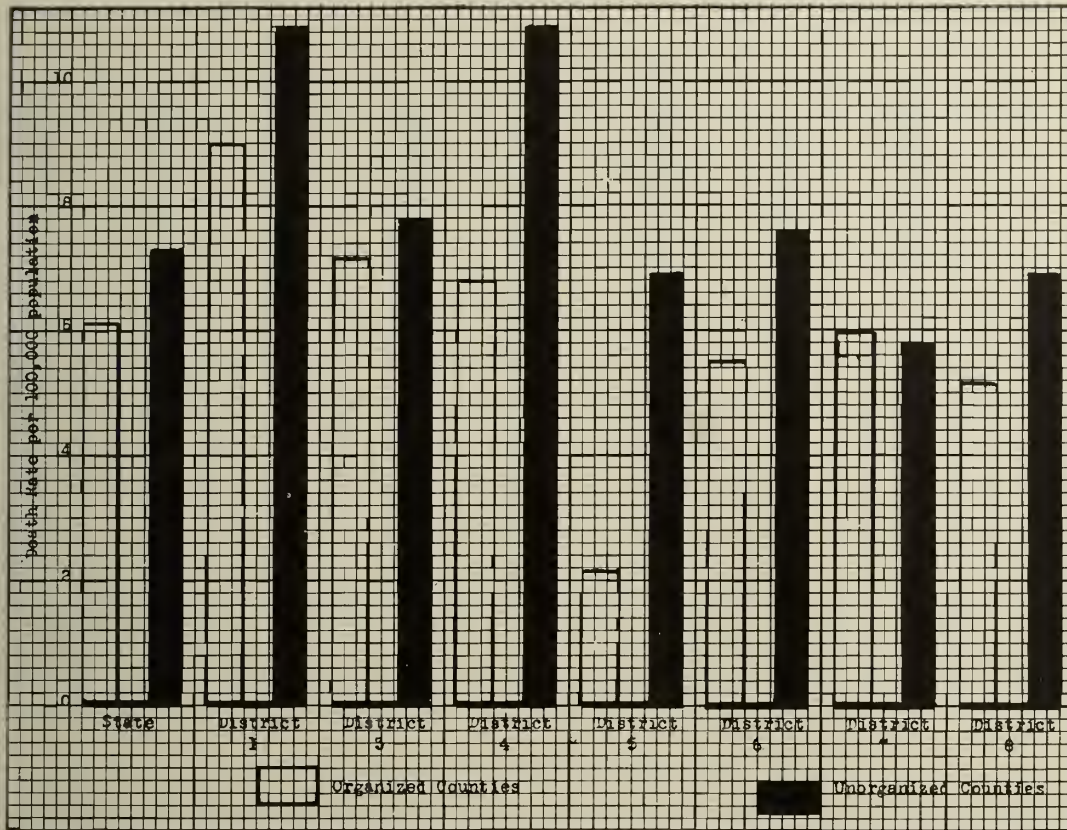
districts. The white bar shows the rate in the counties with full-time health units and the black bar the rate in those counties without any form of health work. In this graph,



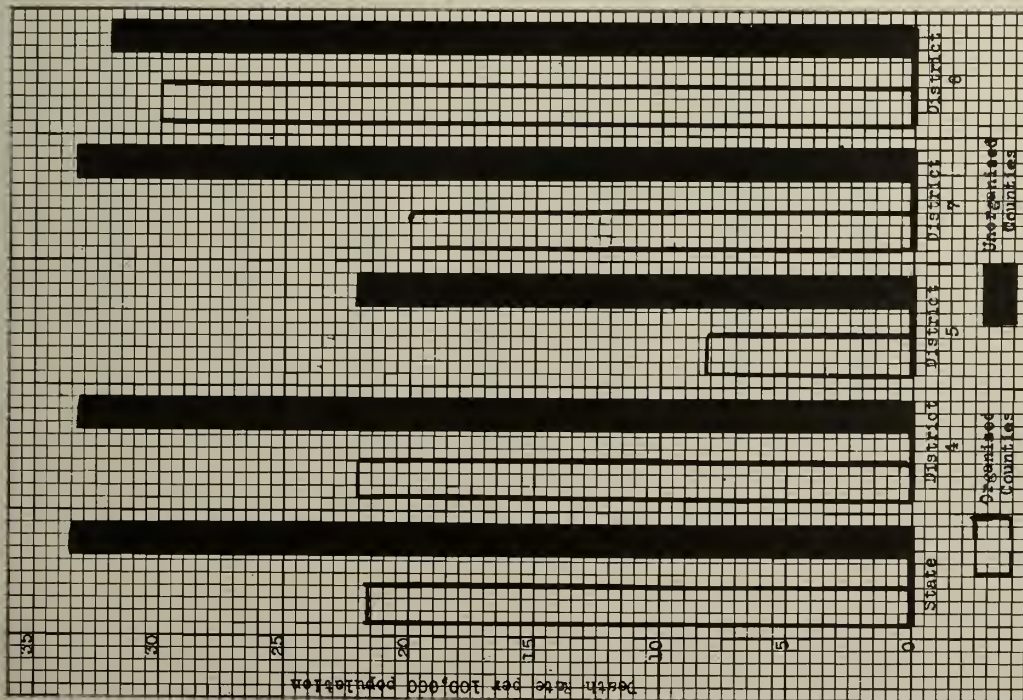
Graph 2. Typhoid fever. Annual average death rate 1927 to 1931.



Graph 3. Diphtheria. Annual average death rate 1927 to 1931.



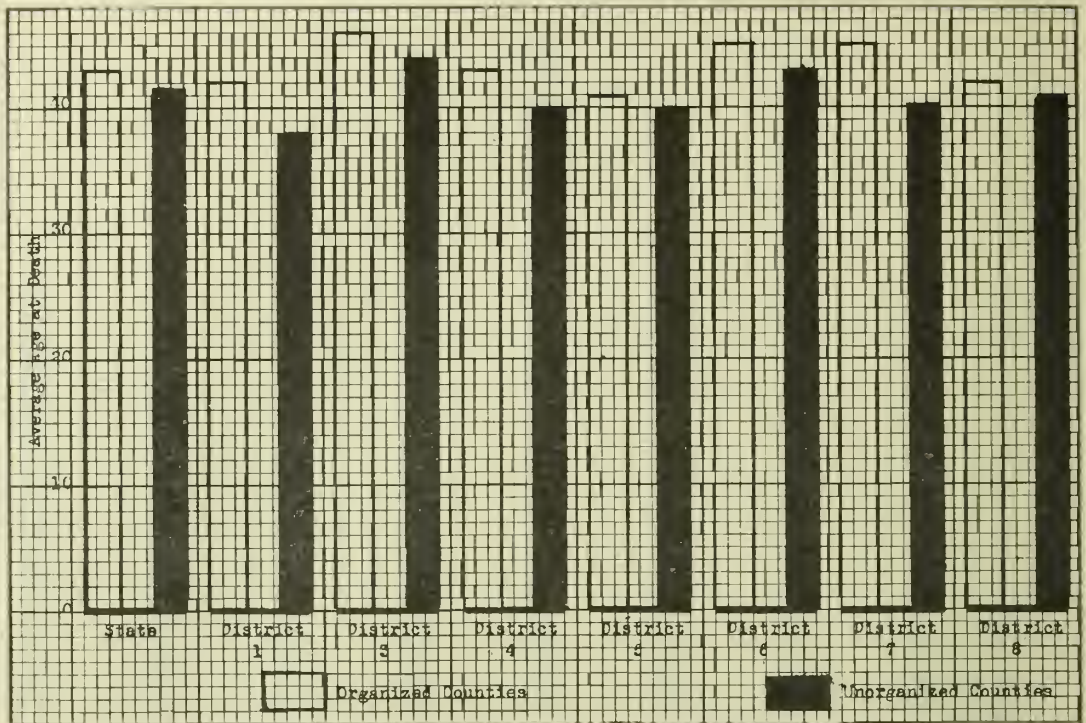
Graph 4. Malaria. Annual average death rate 1927 to 1931.



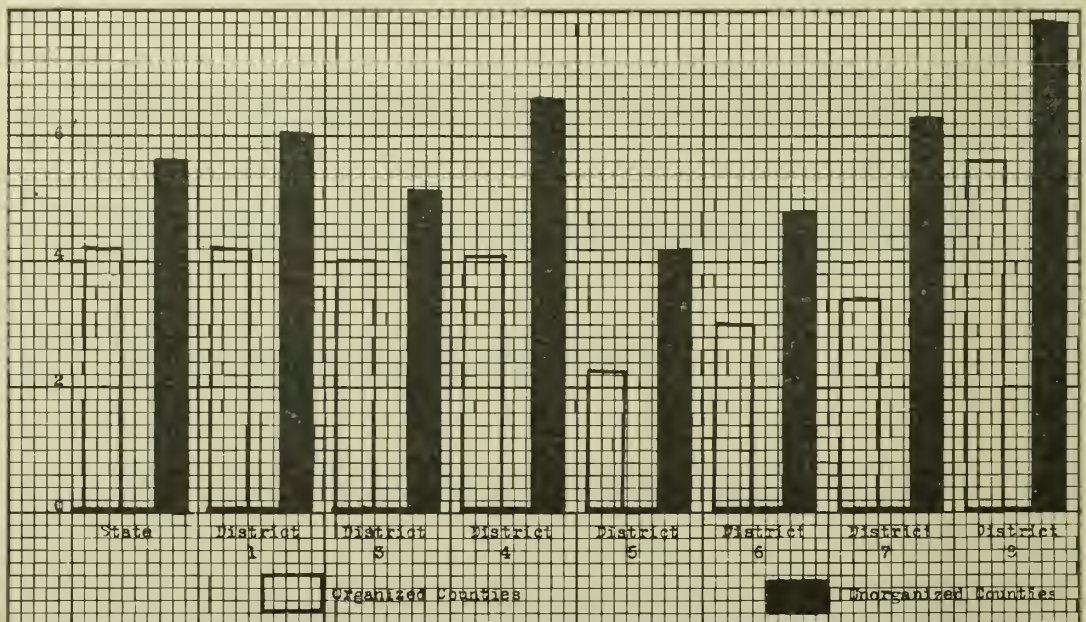
with one exception the black bar shows that the typhoid death rate is far higher in the counties with no form of organized health

work. In District Number 1, the black bar shows a slightly lower death rate than the counties operating full-time health units. The

Graph 5. Average age at death 1931



Graph 6. Death rates per 1,000 population from epidemic diseases. (Exclusive of Influenza and tuberculosis.)



unorganized counties in this district were formed into health units on March 1, 1930, and operated until June 30, 1931. No doubt the intensive work in sanitation and the giving of typhoid vaccine was responsible for this lowered typhoid rate in the unorganized counties in this district.

Graph 3 shows the diphtheria death rate, the white bar indicating the rate in counties with full-time health units and the black bar the counties without organized health work in the same districts. With the exception of District Number 7, the death rate in those counties with health units shows a

(Continued on Page 122)

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WOMAN'S AUXILIARY TO THE AMERICAN
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 Milwaukee, June 12-16, 1933

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Annual Meeting, Macon, May 9, 10, 11, 12, 1933

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Mrs. H. W. Hesse, 112 East Jones St., Savannah.
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Mrs. Lawrence Lee, 527 East 44th St., Savannah.
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Second District

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Secretary-Treasurer—Mrs. Henry Turner Edmondson,
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Members

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Treasurer—Mrs. R. M. Avery, 200 Church Street,
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Mrs. D. E. Morgan, 618 Broad Street, LaGrange.
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FIFTH DISTRICT

District Manager—Mrs. Olin Sanford Cofer, 1337
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Vice-Manager—Mrs. Claud Victor Van Sant, Doug-
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Secretary—Mrs. Hulett Hall Askew, 1329 Springdale
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 Mrs. Joseph Yampolsky, 764 Brookridge Drive, N.E., Atlanta.

SIXTH DISTRICT

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Bibb County

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 Mrs. Thomas Harrold, 575 Orange Street, Macon.
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 Mrs. R. A. Newton, 217 Buford Place, Macon.
 Mrs. L. D. Porch, 1403 Oglethorpe Street, Macon.
 Mrs. C. H. Richardson, 359 Cherokee Avenue, Macon.
 Mrs. T. E. Rogers, Clisby Place, Macon.
 Mrs. James Ross, 363 College Street, Macon.
 Mrs. A. R. Rozar, Shirley Hills, Macon.
 Mrs. John A. Selden, 1102 Ridge Avenue, Macon.
 Mrs. J. M. Sigman, 705 Napier Avenue, Macon.
 Mrs. O. R. Thompson, 206 Belvidier Drive, Macon.
 Mrs. D. D. Walker, 547 Georgia Avenue, Macon.
 Mrs. H. G. Weaver, 120 Calloway Street, Macon.
 Mrs. O. H. Weaver, 702 Ridge Avenue, Macon.
 Mrs. Herring Winship, 203 Cherokee Avenue, Macon.
 Mrs. W. A. Williams, Stanislaus Circle, Macon.

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 Secretary—Mrs. J. C. Watts, 305 East 9th St., Rome.
 Treasurer—Mrs. R. O. Simmons, Rome.

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 Mrs. J. L. Garrard, Rome.
 Mrs. Robert Harbin, Sr., Rome.
 Mrs. Tom H. Moss, Rome.
 Mrs. J. H. Mull, Rome.
 Mrs. C. H. McArthur, Rome.
 Mrs. J. T. McCall, Rome.
 Mrs. M. M. McCord, Rome.
 Mrs. A. F. Routledge, Rome.
 Mrs. William A. Sewell, Rome.
 Mrs. R. O. Simmons, Rome.
 Mrs. J. C. Watts, Rome.

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District Manager—Mrs. Walton A. Johnson, Elberton.
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 Parliamentarian—Mrs. Stewart D. Brown, Royston.

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 Mrs. Wedford Brown, Henderson Avenue, Athens.
 Mrs. J. H. Campbell, Cloverhurst Terrace, Athens.
 Mrs. G. T. Canning, Prince Avenue, Athens.
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 Mrs. Harvey Cabaniss, Jefferson Road, Athens.

Mrs. H. M. Fullilove, Milledge Avenue, Athens.
 Mrs. J. C. Holliday, University Drive, Athens.
 Mrs. Paul Holliday, 143 Westview Drive, Athens.
 Mrs. Marion Hubert, Milledge Circle Apt., Athens.
 Mrs. John Hunnicutt, Milledge Ave., Athens.
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 Mrs. J. C. McKinney, Baster Street, Athens.
 Mrs. Guy Whelchel, Henderson Avenue, Athens.

ELBERT COUNTY

President—Mrs. D. V. Bailey, Elberton.

Members

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 Mrs. D. V. Bailey, Elberton.
 Mrs. J. E. Johnson, Elberton.
 Mrs. Walter Johnson, Elberton.
 Mrs. B. B. Mattox, Elberton.
 Mrs. A. C. Smith, Elberton.
 Mrs. D. N. Thompson, Elberton.

HART COUNTY

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Secretary-Treasurer—Mrs. B. C. Teasley, Hartwell.

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 Mrs. W. I. Hailey, Hartwell.
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 Mrs. A. O. Meredith, Hartwell.
 Mrs. W. E. McCurry, Hartwell.
 Mrs. B. C. Teasley, Hartwell.

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District Manager—Mrs. C. L. Ayres, 129 Doyle St.,
 Toccoa.

Barrow County

President—Mrs. E. R. Harris, Winder.
 Vice-President—Mrs. R. P. Adams, Bethlehem.
 Historian and Corresponding Secretary—Mrs. S. T.
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 Secretary and Hygeia Chairman—Mrs. W. T. Ran-
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 Almond, Winder.
 Organization Chairman—Mrs. W. L. Mathews, Winder.

Members

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 Mrs. C. B. Almond, Winder.
 Mrs. E. R. Harris, Winder.
 Mrs. W. L. Mathews, Winder.
 Mrs. W. T. Randolph, Winder.
 Mrs. S. T. Ross, Winder.

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President—Mrs. D. H. Garrison, Tate.

Secretary-Treasurer—Mrs. G. C. Brooke, Canton.

Members

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 Mrs. G. C. Brooke, Canton.
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 Mrs. D. H. Garrison, Tate.
 Mrs. F. B. Murphy, Canton.

Mrs. J. T. Pettit, Canton.
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Vice-President—Mrs. M. F. Haygood, Alto.

Secretary and Treasurer—Mrs. O. N. Harden, Cornelia.

Members

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 Mrs. P. Y. Duckett, Cornelia.
 Mrs. W. H. Garrison, Clarkesville.
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 Mrs. F. M. Haygood, Alto.
 Mrs. J. B. Jackson, Clarkesville.
 Mrs. E. H. Lamb, Cornelia.
 Mrs. R. B. Lamb, Demorest.
 Mrs. J. H. McClure, Cornelia.

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President—Mrs. J. H. Downey, Gainesville.

Secretary-Treasurer—Mrs. W. R. Garner, Gainesville.

Hygeia Chairman—Mrs. J. K. Burns, Jr., Gainesville.

Members

Mrs. J. K. Burns, Jr., Gainesville.
 Mrs. Pratt Cheek, Gainesville.
 Mrs. Bradley Davis, Gainesville.
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 Mrs. W. R. Garner, Gainesville.
 Mrs. L. W. Hodges, Gainesville.
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 Mrs. Jesse Meeks, Gainesville.
 Mrs. Lee Rogers, Gainesville.
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JACKSON COUNTY

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Vice-President—Mrs. S. A. Boland, Jefferson.

Secretary-Treasurer—Mrs. L. C. Allen, Hoschton.

Members

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 Mrs. M. B. Allen, Hoschton.
 Mrs. S. A. Boland, Jefferson.
 Mrs. Ralph Freeman, Hoschton.
 Mrs. C. B. Lord, Jefferson.
 Mrs. E. M. McDonald, Jefferson.
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STEPHENS COUNTY

President—Mrs. J. H. Terrell, Toccoa.

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 Mrs. W. B. Heller, Toccoa.
 Mrs. J. E. Isbell, Toccoa.
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 Mrs. J. H. Terrell, Toccoa.

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District Manager—Mrs. James B. Dillard, Davisboro.

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Parliamentarian—Mrs. William Martin Cason, Sandersville.

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President—Mrs. Lucas Roscoe Bryson, Louisville.
Secretary-Treasurer—Mrs. John Judson Pilcher, Wrens.

Members

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Mrs. Samuel Cathcart Ketchin, 'Louisville.
Mrs. John R. Lewis, Louisville.
Mrs. John Judson Pilcher, Wrens.
Mrs. Samuel Thompson Redgrave Revell, Louisville.

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Mrs. W. D. Mixson, 619 Nicholls St., Waycross.

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 Mrs. W. L. Pomeroy, 806 Carswell Avenue, Waycross.
 Mrs. W. F. Reavis, Cherokee Heights, Waycross.
 Mrs. Kenneth McCullough, Waycross.
 Mrs. Ansley Seaman, Seals Apt., Waycross.
 Mrs. C. M. Stephens, 312 Hill Street, Waycross.
 Mrs. R. C. Walker, 502 Gilmore Street, Waycross.
 Mrs. J. L. Walker, 502 Gilmore Street, Waycross.
 Mrs. C. A. Witmer, 501 Gilmore Street, Waycross.

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OCMULGEE ASSOCIATION

(Dodge-Pulaski-Bleckley Counties)

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Members

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 Mrs. J. C. Wall, Eastman.
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Members

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PROGRAM—PRELIMINARY

Woman's Auxiliary—A. M. A.

The Woman's Auxiliary to the American Medical Association announces a preliminary program for its meeting at Milwaukee, Wisconsin, June 12th to 16th, inclusive.

Hotel Pfister Headquarters

Monday, June 12th, 12:30 P. M.: Luncheon at College Woman's Club in honor of past presidents. 7:00 P. M.: Dinner for National Board, delegates and wives of officers with musical program.

Tuesday, June 13th—9:00 A. M.: General meeting, Roof Room. 12:30 P. M.: Luncheon and bridge at the Wisconsin Club. Other entertainment for those not wishing to play bridge. 8:00 P. M.: General

meeting of A. M. A. 10:00 P. M.: Informal dance at Wisconsin Club.

Wednesday, June 14th—9:00 A. M.: General meeting, Roof Room. 12:30 P. M.: Auxiliary luncheon, Fern Room. 4:00 P. M.: Teas in private residences. 8:30 P. M.: Light opera.

Thursday, June 15th—9:00 A. M.: General meeting, Roof Room. 12:00 noon: Trip to Oconomowoc Lake District, luncheon at 12:30 P. M. 2:00 P. M.: Sight seeing tour of Milwaukee. 6:30 P. M.: "Bring Your Husband" Dinner, Fern Room. 9:00 P. M.: President's reception and ball at Schroeder Hotel.

Friday, June 16th—10:00 A. M.: Golf Tournament.

NEWS ITEMS

Dr. J. B. H. Day, Social Circle, was recently elected Chairman of the Staff of the Walton County Hospital, Monroe.

The First District Medical Society held its mid-winter meeting in the Woman's Club Room at Statesboro on February 21st. The following titles for papers were on the scientific program: "Hemorrhage of Stomach—Case Report", Dr. W. R. Lovett, Sylvania; "Ureteral Stones: The Non-Operative Treatment", Dr. W. S. Wilson, Savannah; "Mercury Poisoning: Effects and Treatment—Case Report", Dr. John W. Daniel, Savannah; "Pyloric Obstruction in Infants", Dr. H. J. Morrison, Savannah; "Scars and Keloids", Dr. Ralph H. Chaney, Augusta; "Syphilis of the Central Nervous System Simulating Diabetes", Dr. L. Minor Blackford, Atlanta; "The Toxicity of Cinchophen", Dr. J. R. Broderick, Savannah; "Nirvanol Treatment of Chorea—Case Report", Dr. E. N. Gleaton, Savannah; "Mixed Tumors of the Parotid Region", Dr. Julian K. Quattlebaum, Savannah; "Massive Dissecting Aneurysm of the Innominate Artery—Case Report", Dr. Wm. H. Myers, Savannah.

Dr. Alton M. Johnson announces the opening of his office in the Exchange Bank Building, Valdosta. Practice limited to diseases of infants and children.

The Randolph County Medical Society met at the Woman's Club Room, Cuthbert, on March 2nd. Dr. J. Victor Roule, Albany, read a paper on "Trachoma". Members of the society gave clinical case reports.

The University of Illinois, Chicago, invited Dr. Allen H. Bunce, Atlanta, to join in a dinner in honor of Dr. William Allen Pusey in the Victorian Room of the Palmer House, Chicago, on March 2nd.

Dr. Howard J. Morrison, announces the opening of his office at 3 East Gordon Street, Savannah. Practice limited to pediatrics.

Dr. C. W. Strickler has been elected President of the Staff of Grady Hospital, Atlanta; Dr. Geo. W. Fuller, Vice-President; and Dr. Jack C. Norris, Secretary-Treasurer.

The Macon County Medical Society met at the Macon County Clinic, Montezuma. Officers were elected for this year. The next meeting will be held in April at Marshallville. The members will be entertained by Dr. and Mrs. D. B. Frederick in their home.

Dr. John A. Rhodes, Crawfordville, has been elected Taliaferro County physician at a recent meeting of the County Commissioners.

Dr. John T. Burkhalter, Savannah, addressed the Exchange Club at Hotel Savannah on February 13th.

The Staff of the Ware County Hospital, Waycross, entertained the members of the Ware County Medical Society at dinner on February 14th.

Dr. V. H. Bassett, City Health Officer for Savannah, stated in his annual report that the health record of Savannah for 1932 was decidedly better than in the previous year.

Dr. Arthur N. Berry announces the opening of offices at 405-406 Murrah Building, Columbus. He will engage in the general practice of medicine.

The Troup County Medical Society held its annual meeting on February 23rd. Officers were elected for 1933. Dr. Enoch Callaway, LaGrange, read a paper entitled "Tonsillectomy in Childhood Tuberculosis".

The Georgia Medical Society, Savannah, held its regular meeting on February 28th. Dr. H. Y. Righton, Savannah, read a paper entitled "Transurethral Surgery for Vesical Neck Obstruction"; discussed by Dr. L. W. Shaw and Dr. Wm. Shearouse, both of Savannah. Dr. C. F. Holton, Savannah, gave case reports, "Unusual Cases of Industrial Trauma."

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on March 2nd. Dr. T. L. Byrd, Atlanta, gave a case report, "Acute Cinchophen Poisoning"; Dr. F. Lee Bivings, Atlanta, read a paper entitled "Preconceptional and Prenatal Influences Affecting the Newborn"; Dr. R. R. Kracke, Emory University, gave a clinical talk, "Neucleotide Therapy in the Leukopenic Diseases". Discussions were led by Dr. R. A. Bartholomew, Dr. C. B. Upshaw and Dr. Wm. H. Kiser, all of Atlanta.

The Spalding County Medical Society met at the R. F. Strickland and Son Memorial Hospital, Griffin, on February 21st. Dr. Chas. H. Richardson, Macon, President-Elect of the Association, read a paper entitled "Surgery of the Gallbladder"; Dr. Frank K. Boland, Atlanta, read a paper on "Surgery of the Colon".

The doctors of Macon have organized what is known as the Mulberry Street Clinic. The medical staff consists of Dr. I. H. Adams, President; Dr. Wallate L. Bazemore, Vice-President; Dr. W. C. Boswell, Secretary; Dr. A. M. Phillips, Treasurer and

Business Manager; Dr. R. G. Newton, Dr. R. W. Richardson, Dr. V. H. McMichael, Dr. Leon D. Porch, Dr. W. R. Golsan, Dr. Jas. A. Fountain, Dr. J. A. Selden, Dr. C. N. Wasden, Dr. John I. Hall and Dr. J. R. Jordan. Every branch of medicine, surgery and dentistry is represented by some member of the organization. The Clinic will be open every Thursday afternoon and operated for the benefit of people who are ordinarily able to pay for medical care. Each patient must present a certificate from some minister, charitable organization or other reputable person before being admitted. No physician will receive compensation for his services, but each patient must pay a fee of 50 cents to cover the cost of equipment, surgical dressings, medicine and other supplies. All prescriptions given patients at the clinic will be filled at Jacobs' Pharmacy and Chapman's Pharmacy at reduced prices.

Dr. W. D. Jennings, Augusta, has been elected Chairman of the Board of Trustees of University Hospital; Dr. L. P. Holmes, Superintendent; Dr. H. W. Shaw, Chairman of the Purchasing Committee.

The Macon Medical Society met at the Macon Hospital on February 21st. Dr. J. Allen Smith read a paper on "The Relation of Diet to Nasal Disturbances." Dr. H. C. Atkinson opened the discussion.

The Tenth District Medical Society met at Augusta on February 22nd. Dr. N. J. Newsom, Sandersville, read a paper entitled "Streptococcal Infections"; Dr. H. M. Michel, Augusta, "Orthopedic Aphorism"; Dr. C. W. Crane, Augusta, "Some Recent Advances in Thoracic Surgery"; Dr. S. C. Ketchin, Louisville, "Acute Abdominal Conditions"; Dr. V. P. Sydenstricker, Augusta, "Certain Manifestations of Cerebral Syphilis."

Dr. L. R. Bryson, Louisville, Jefferson County Commissioner of Health, in co-operation with the State Department of Public Health, conducted tuberculosis clinics at Louisville on March 6th and 7th.

Dr. V. F. Dinsmore, Tifton, addressed the Tift County Board of Trade on February 24th. He spoke in behalf of the Costal Plain Hospital and its medical and surgical staff. Support of Tift county was urged for the hospital in order that it might meet pressing obligations, continue to operate and relieve suffering in the county. Dr. Dinsmore stated that the hospital and staff had done \$18,000.00 worth of charity work during the years 1931-32. The value of the hospital was shown by the people having a hospital in which they might be treated and to prevent the money being spent at other places, also a considerable amount of funds which are brought into Tifton annually by the hospital and its staff.

Dr. W. L. Moss, Dean of the University of Georgia Medical Department, Augusta, addressed the members of the Georgia Academy of Science at the Georgian Hotel, Athens, on February 24th.

Dr. and Mrs. C. J. Maloy, Helena, announce the establishment of the Kenneth Maloy Memorial Clinic for the underprivileged children in Telfair and adjoining counties. The clinic will be open Tuesday and Thursday afternoons. All children under twelve years of age will be examined and treated who may present a certificate from any reputable person or organization stating that they are unable to secure treatment otherwise. The Helena Drug Store will sell them drugs and surgical supplies at cost.

The Terrell County Medical Society met at the office of its President, Dr. Guy Chappell, Dawson, on February 24th. Dr. Chappell and Dr. Lucius Lamar, Dawson, spoke on "Lumbago, Its Causes, Complications, Sequela and Treatment". Dr. J. H. Lewis, Dawson, will read a paper at the next meeting of the society to be held on March 31st.

The Walker County Medical Society met at Lafayette on March 3rd. Dr. Wm. H. Cheney, Chattanooga, Tenn., read a paper on "Endocrinology". The society passed resolutions to approve the minority report of the Committee on the Cost of Medical Care.

The Ninth District Medical Society met at Gainesville on March 15th. Dr. L. C. Allen, Hoschton, read a paper entitled "Uterine Hemorrhage", discussed by Dr. J. H. Downey, Gainesville. Dr. R. T. Dorsey, Atlanta, "Etiological and Clinical Formula for Nervousness". Dr. Marvin M. Head, Zebulon, President of the Association, spoke on legislation and organization. Dr. E. L. Bishop, Atlanta, "Cancer of the Stomach in Young Patients". Dr. R. L. Rogers, Gainesville, "Addison's Disease". discussion was led by Dr. Pratt Cheek, Gainesville. The members were entertained at dinner by the Hall County Medical Society at the Dixie-Hunt Hotel.

The Georgia Conference for Social Work will be held at Augusta, April 24, 25, 26. Hotel Richmond will be headquarters.

The John D. Archbold Memorial Hospital, Thomasville, announces the temporary appointment of Dr. Reginald A. Shipley, Dayton, Ohio, as interne. He is a graduate of Western Reserve University School of Medicine, Cleveland, Ohio, and completed a sixteen months' internship in medicine at Lakeside Hospital, Cleveland, Ohio.

The Pan American Medical Association held its Fourth Congress at Dallas, Texas, March 21st to 26th. The Medical Association of Georgia was invited to designate a delegate and an alternate delegate.

The Southeastern Surgical Congress held its Fourth Annual Assembly at the Biltmore Hotel, Atlanta, March 6, 7, 8. Dr. C. W. Roberts, Atlanta, read a paper entitled "Congenital Anomalies of the Ileocolic Area with Special Reference to Chronic Manifestations"; Dr. Wm. R. Houston, Augusta, "The Need of Action"; Dr. Chas. H. Richardson, Macon, Presi-

dent-Elect of the Medical Association of Georgia, read a paper "Agranulocytosis with Report of an Unusual Case."

Dr. J. E. Penland and Dr. W. D. Mixson, both of Waycross, entertained the members of the Ware County Medical Society and the dentists of Waycross at dinner on March 2nd. Dr. B. R. Bussell, Waycross, read a paper entitled "Focal Infections".

Dr. Frank K. Boland, Atlanta, addressed the class of graduating nurses at Oglethorpe Private Infirmary, Macon, on February 28th. Dr. A. R. Rozar, President of the Board of Directors, introduced Dr. Boland. Dr. Thos. H. Hall presented the diplomas. The musical program consisted of quartet numbers and a violin solo.

The Georgia Medical Society held its regular meeting on March 14th. Dr. J. Reid Broderick, Savannah, read a paper entitled "Insulin Therapy with Special Comments on Its Use in Profound Malnutrition"; Dr. T. J. Charlton and Dr. J. W. Daniel, Jr., both of Savannah, led the discussion. Dr. Rufus E. Graham, Savannah, "Pyemia with Abdominal Involvement—Case Report". Dr. E. N. Maner, Savannah, "New Growths of the Tonsils—Case Report."

The American Association for the Study of Goiter will hold its next meeting at Memphis, Tenn., May 15, 16, 17.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on March 16th. Titles for papers and case reports on the program were as follows: "Test Tube Specimens of Placental Infarcts", Dr. R. A. Bartholomew, Atlanta; "Transurethral Resection of Prostatic Calculus", Drs. Ballenger, Elder and McDonald, Atlanta; "The Interrelationship of the Female Sex Hormones in Functional Menstrual Disorders", Dr. Ben T. Beasley, Atlanta; "Injection Treatment of Hemorrhoids", Dr. Hulett H. Askew, Atlanta. The discussion was led by Dr. W. E. Person, Dr. W. B. DuVall, and Dr. Marion C. Pruitt, all of Atlanta.

The Troup County Medical Society met at the Colonial Hotel, LaGrange, on March 1st. Dr. Enoch Callaway, LaGrange, read a paper entitled "The Removal of Tonsils in Children with Tuberculosis"; Dr. M. K. Bailey, Atlanta, "Infections of the Kidneys and Ureters."

Dr. Geo. E. Atwood, Waycross, Ware County Commissioner of Health, addressed the Waycross Rotary Club on March 13th.

Dr. L. R. Bryson and Dr. S. C. Ketchin, both of Louisville, were the principal speakers at a meeting of the Louisville Kiwanis Club on March 7th.

The Telfair County Medical Society met at McRae on March 15th.

OBITUARY

Dr. James Edward Pennington, Esom Hill; member; University of Georgia Medical Department, Augusta, 1888; aged 74; died at a private hospital in Cedartown on February 13, 1933. He had practiced medicine in Polk county for more than forty years and was well known throughout that section. His friends were numbered by the thousands. Dr. Pennington was thoroughly devoted to his work and successful in the practice of medicine. He was a valuable citizen, a member of the Polk County Medical Society and the Methodist church. Surviving him are his widow, one daughter, Mrs. G. F. Durham, Cedartown; one step-daughter, Mrs. J. M. Hogan, Rome. Funeral services were conducted from the Esom Hill Methodist church by Rev. T. N. Noble. Interment was in the city cemetery at Cedartown.

Dr. Samuel A. V. Christophine, Attapulgus; member; Southern Medical College, Atlanta, 1898; aged 65; died at his home of heart disease on February 22, 1933. He was a native of Fulton county. For more than thirty years he had been a leading physician in Decatur county. While he was a general practitioner, he was especially interested in pediatrics. Dr. Christophine was favorably known in Decatur and adjoining counties as an excellent physician, a citizen of sterling worth, an ardent social and religious worker. Surviving him are his widow and one son, Frank Christophine. Burial was in Oakland cemetery, Atlanta.

Dr. Valentine H. Taliaferro, Eatonton; member; Emory University School of Medicine, Emory University, 1892; aged 65; died at his home of angina pectoris on February 25, 1933. He was born and reared in Atlanta. After graduating in medicine, he took a post-graduate course in London. After he returned to America, he practiced in Atlanta for several years. Dr. Taliaferro had been a leading physician in Eatonton and Taliaferro county for more than a quarter of a century. He was actively identified with every interest of the county and had many friends. He was a member of the Putman County Medical Society and the St. Phillip's Cathedral church, Atlanta. Surviving him are his widow, one sister, Mrs. L. C. Elkin, St. Augustine, Fla. Funeral services were conducted by Dean Raimundo de Ovies from the home. Burial was in the Eatonton city cemetery.

Dr. Mell Aycock, Atlanta; member; Emory University School of Medicine, Emory University, 1917; aged 40; died at a private hospital in Atlanta on February 25, 1933. After graduating in medicine, he served as an interne at Grady Hospital, Atlanta, one year; then enlisted in the medical corps of the United States Army with the rank of Lieutenant. While with the 35th Ambulance Company of the Seventh Division in France, he was promoted to Captain. After the armistice was signed, he returned to Atlanta and served one year as an interne at St. Joseph's Infirmary, Atlanta. Dr. Aycock had been a leading physician in Atlanta since the World War and

was associated with Dr. G. Pope Huguley and a member of the staff of St. Joseph's Infirmary. He had many friends and an extensive practice. He was a member of the Fulton County Medical Society, American Medical Association, F. & A. M., American Legion and the Druid Hills Methodist church. Surviving him are his widow, one son, Mell Aycock, Jr.; one daughter, Miss Laura H. Aycock. Dr. John B. Peters conducted the funeral services from the Peachtree chapel of Brandon, Bond & Condon. Interment was in Augusta.

Dr. William Aaron Gibson, Jr., Thomson; Emory University School of Medicine, Emory University, 1915; aged 40; died suddenly at his home on February 27, 1933. He was a prominent physician and held in high esteem by many acquaintances.

Dr. Ellis H. Adams, Porterdale; Emory University School of Medicine, Emory University, 1882; aged 81; died at his home after an extended illness on February 20, 1933. For many years he practiced in Putman county, then removed his family to Newborn and later retired and moved to Porterdale. Dr. Adams was recognized as a leading citizen and physician. He was always interested in the general welfare of the community, state and the churches. Surviving him are his widow, three daughters, Mrs. E. K. Wheeler, Eatonton; Mrs. J. A. Venable, Atlanta; Mrs. E. T. Denham, Sarasota, Fla.; and two sons, B. W. and E. H., Jr. Interment was in the city cemetery of Covington.

Dr. Andrew Cook Johnson, Garfield; member; Baltimore Medical College, Baltimore, Md., 1897; aged 60; died suddenly at Swainsboro on February 20, 1933. He was born and reared in Emanuel county and resided there his whole life. Dr. Johnson was favorably known and had an extensive practice in his home county. His success as a practitioner accounted for the loyal clientele in the entire community. Civic and religious affairs took the residue of his time after the care of patients. Surviving him are his widow, two daughters, Miss Georgia Johnson, and Mrs. Hardy Sikes; two sons, Julian and Sam Johnson. Interment was in Garfield cemetery.

Dr. George Turner Horne, Augusta; member; University of Georgia Medical Department, Augusta, 1894; aged 72; died suddenly at his home of heart disease on March 6, 1933. At the time of his death and for many years previous he had been Associate Professor of Gynecology at the University of Georgia Medical Department. He was a prominent physician and civic leader. Dr. Horne was known by a generation of Augusta residents as their family physician and was never too busy to do charity work for the poor. He served one term as city councilman of Augusta. The March meeting of the city council was postponed on account of his death and the records court was closed for a day through respect for Dr. Horne. He was a member of the Richmond County Medical Society and the American Medical Association. Surviv-

ing him are his widow; his mother, Mrs. Mattie Jennings, Atlanta; five brothers, Mayor W. D. Jennings, Augusta; F. P. Jennings, New York; M. G. Jennings, New York; J. S. Jennings, Columbia, S. C., and J. A. Jennings, Augusta; four sisters, Mrs. Janie Burchalter, Mrs. Amelia Strom, Mrs. Margaret Rehannick, and Mrs. Kate Icher. Members of the Richmond County Medical Society were pallbearers, other members of the society, with members of the police and fire departments, formed an honorary escort. Interment was in the Westover Memorial Cemetery, Augusta.

IN MEMORIAM

James Murray Cook was born in Ellaville, Ga., September 26, 1886. He received his literary education at the Ellaville High School and the Americus Normal School. In 1915 he graduated from Emory University School of Medicine. On August 15, 1919, he located at Sardis and immediately became a member of the Burke County Medical Society.

On October 14, 1919, he married Miss Myra Holloway, of Ellaville, to which union has been born three sons, ages ten, eight and six years.

After a long illness he died at Lenwood Hospital, Augusta, on January 2, 1933, and was buried at Ellaville.

In the death of Dr. Cook, the Burke County Medical Society has lost a valued member, who had served us as President with great credit to himself and the society.

Dr. Cook was a physician in the true sense, always faithful to every duty to the public and every obligation to his patients. He never considered his own interest as paramount to those of his patients.

To his bereaved family we extend our sincere sympathy and order that a copy of this memoriam be sent to his wife, the Journal of the Medical Association of Georgia, and that a copy be spread upon our minutes.

R. L. MILLER, M.D.

J. M. BYNE, JR., M.D.

Committee, Burke County Medical Society.

ABBOTT LABORATORIES—SUDDEN DEATH OF THE PRESIDENT, DOCTOR ALFRED S. BURDICK

Dr. Alfred S. Burdick, president of the Abbott Laboratories of North Chicago, Illinois, died Saturday, February 11th, of pneumonia, at the age of 66. He was buried the following Wednesday at Rosehill Cemetery, Chicago. In 1921, Dr. Burdick was elected president of the Abbott Laboratories. The new location at North Chicago had already been selected as a site for the new Abbott Laboratories and when the latter was completed the company moved into these new quarters from the old location in Ravenswood. Meantime the Swan-Myers Company of Indianapolis was consolidated with Abbott Laboratories, thus increasing and extending the business. Most or all of these improvements took place under the presidency of Dr. Burdick. In fact the completed plant, which is

one of the largest and best in the United States, is in many respects a tribute to the genius and wisdom of Dr. Burdick. He had surrounded himself with some of the best executives as well as professional men and thus built up an organization which will continue to function, efficiently notwithstanding Dr. Burdick's premature death.

RESULTS ACCOMPLISHED IN COUNTIES OF GEORGIA WITH FULL-TIME HEALTH UNITS

(Continued from Page 110)

much lower rate than in the counties in the same districts without organized health work.

Graph 4 shows the death rate for malaria. This disease is most common in middle and southern Georgia, so comparisons were made only in Districts 4, 5, 7 and 8. Without an exception, this graph shows very clearly that organized health work has reduced the death rate from malaria fever in the counties operating full-time health units. Though some excellent malaria control work is being put on in counties without health units, the most decided benefits are shown in the white bar.

Graph 5 shows that the average age of death in counties operating full-time health units is from 2 to 5 years longer than in those counties without organized health units.

Graph 6 shows that the death rate from epidemic diseases (exclusive of influenza and tuberculosis) is much lower than in those counties in the state without health units.

The facts presented in these graphs show without question that it is possible to control to a great extent communicable diseases in any county in the state and that with the control of these diseases the average age of death is extended in each county that is operating a full-time health unit. Since Georgia has 159 counties, we can never hope to establish a full-time health unit in all of our smaller counties, but with the establishment of health districts composed of two or more counties, full-time health work could be expanded over the entire state and every citizen given the health protection which is now offered to the citizens living in the larger counties which are financially able to support a full-time health unit alone.

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TONSILLECTOMY IN CHILDHOOD TUBERCULOSIS*

ENOCH CALLAWAY, M.D.
La Grange

In view of the fact that the removal of tonsils is probably the most generally practiced of all surgical procedures, it is rather surprising to find so little actual information as to the general value of the procedure and practically no information on its value in particular types of cases. The value of removing foci of infection as an aid to recovery from general systemic diseases, as well as for the cure of conditions apparently caused directly by such foci, has long been recognized. Certain statistical studies have been made to show that the occurrence of cardiac disorders and arthritis are as common after tonsillectomy as in groups who have not had the benefit of this operation. These observations are probably correct but apparently do not take into consideration that tonsillectomy is a usual routine in this type of diseases. To avoid such an error, I have compared my cases to their own rate of improvement before operation and also to a group with as near the same environmental conditions as possible.

I have had under my observation a total of nearly one hundred children with childhood tuberculosis and I have operated on thirty-five of these cases. Due to conditions to be brought out later in this paper, I have been unable to keep a sufficiently accurate check on approximately half my cases to feel that they should be used in compiling comparative data.

As part of the health program of Callaway Mills a tuberculosis survey was made in two grammar schools. The pupils in one school are all children of mill employees, while those

in the second school are about equally divided between the children of mill employees and the children of people of other occupations. While a careful study of results in the second school tends to confirm my findings, I have eliminated these cases from statistical comparison for the following reasons: Many of these cases have been under observation for only short periods; some cases were in families having no connection with the mills and although advice was given it either was not carried out or only carried out in an inadequate manner. The parents of the children in the first school were all mill employees and, having had the benefit of health work and health education for almost twenty years, were both willing and able to give me whole-hearted cooperation. For the above reasons, I am using only the cases from the first school as a basis for my averages, however, I have carefully checked the cases in the second school and a careful analysis of results from the more or less faulty records only serves to strengthen the findings given in this paper.

A diagnosis of tuberculosis in these cases was made by first running a Mantoux test on all children and then giving all positive reactors a careful physical examination including temperature records for at least four consecutive days and radiographs of the chest made either by me or the State Board of Health. Cases reacting to tuberculin but showing no clinical or radiographic evidence of tuberculosis have been eliminated from this study though they have been put on a special regime and kept under observation.

All cases have been put on a regime of three hours extra rest in the middle of the day, early bed-time hours, milk between meals and limited physical activity. Weight and temperature have been checked each week. It is not the purpose of this paper to go into results in so far as the cure of tuberculosis is

*Read before the Troup County Medical Society, LaGrange, Georgia, February 23, 1933.

concerned, therefore, I will only say that in most cases it has been good and I have felt that only a few of these children have needed hospital care. Three children who had their tonsils removed have been to the State Tuberculosis Hospital at Alto, Georgia, as have two children in the unoperated group. One in each group has been eliminated from consideration because they both showed such extremely high rates of gain for children of their age that their inclusion would have given high average gain figures without changing the ratio in any manner. The other cases having hospital treatment show a slightly lower average gain than those in the same groups who had only home treatment. This of course is easily explained as we naturally only recommended hospital care for those cases not making satisfactory progress at home and their entire gain has been recorded since their admission to the hospital.

While giving these children physical examinations it was found that many of them had severely infected tonsils with enlarged anterior cervical lymph nodes. There were also twelve children who had had their tonsils removed under ether anesthesia from one to four months prior to the diagnosis of tuberculosis. I decided to compare these twelve cases with the children needing operation. At the end of ten months' observation I was surprised to find that the children who had had their tonsils removed under ether anesthesia had shown less improvement in weight gain than the other children; showing an average gain of only .38 pounds per month. As I had weighed these children the previous school term I was able to analyze their weight gain and it was found that most of them lost weight following the operation and did not regain their former weight for about six months. This demanded consideration and after a careful study of home conditions, average age and advancement of disease found on examination, the conclusion was reached that something connected with the operation actually temporarily harmed these children. Was this the loss of the tonsils; the operative shock or the effects of ether anesthesia? Since I did not believe that the presence of badly infected tonsils could be of any value I deter-

mined to remove tonsils where absolutely indicated using local anesthesia.

As these children ranged from five to thirteen years of age it was necessary to devise a method whereby they would be willing to have their tonsils removed while awake. The cases with grossly diseased tonsils producing secondary symptoms were selected and after receiving their parents' consent a psychological preparation was begun. Their throats were painted daily by the nurses to accustom them to the use of a tongue depressor and to manipulations in the throat. At the same time the nurses suggested to them that it would be fine if they could have their tonsils removed. Children who had received marked benefit were pointed out and a desire for the operation was created to such a degree that the children would ask me if I could do this for them. On first application they were told general anesthesia could not be used and that they were too young to stand the operation under local anesthesia as there was some pain and considerable discomfort attached to the procedure. This only increased their determination to show that they were able to stand the operation. Having built up their pride and established their confidence, tonsils were removed for over thirty-five of these young patients without the least difficulty; the child in every case cooperating to the utmost. The technique of the Tyding operation was not changed except that as much dissection as possible was done with a very sharp small curved knife, thereby, eliminating as much unpleasant traction as possible. No mouth gag was used and the tongue depressor as little as possible. Atropine was used but if there was any difficulty with saliva or blood, suction was used; this did not cause alarm as the suction apparatus had been demonstrated to them before the operation.

The results obtained are best shown by the average monthly gain, of the group whose tonsils were removed, prior to operation and after operation and by the same average of the group where no operation had been performed. Eighteen children observed for an average time of 6.8 months before operation had gained an average of .51

pounds per month. These same children observed for an average of 8 months after removal of tonsils under local anesthesia gained an average of .68 pounds per month. Fourteen children whose tonsils were not removed, observed over an average of 14.4 months, gained an average of .55 pounds per month. As is plainly shown by the average gain of children operated on prior to their operations, they were selected from our worse cases showing decided indications for tonsillectomy. While the average time of observation of these children is only about 15 months since a positive diagnosis of tuberculosis had been made, the entire study covers a period of almost twice this time. Over 1,200 children were given Mantoux tests and some re-checked on doubtful reactions. From the positive re-actors due to changes of residence and other causes only forty-four cases were considered as being sufficiently observed to be used for statistical study.

Although these groups are small and I hope to report later on larger groups observed over longer periods of time I feel that this preliminary report is of value and will justify the following conclusions:

1. Tonsillectomy under ether anesthesia is temporarily harmful to children suffering with tuberculosis.
2. Mantoux tests should be run routinely on all children before tonsils are removed.
3. Tonsillectomy on very young children can be done satisfactorily under local anesthesia if the proper psychological preparation is carried out.
4. Tonsillectomy under local anesthesia where indicated shows decided benefits to children suffering with tuberculosis.

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A. H. Graham, L. R. Murphree and D. G. Gill, Montgomery, Ala. (*Journal A. M. A.*, April 8, 1933), point out that a single injection of from 5 to 10 units of precipitated toxoid has rendered 171, or 92.4 per cent, of 185 strongly Schick positive children Schick negative. Of 613 children, 592, or 96.6 per cent, were Schick negative when tested from two to four months after a single injection. The original immunity status was unknown, but 72 per cent were preschool children.

ENDOMETRIAL HYPERPLASIA*

Report of Cases

PAUL L. HOLLIDAY, M.D.

Athens

In order to better understand the disease known as endometrial hyperplasia, it is well to review briefly the histological changes occurring in the mucous lining of the uterus in a normal menstrual cycle. Four or five days following the onset of the menstrual flow, the surface and gland epithelium of the endometrium is of a rather low columnar or cuboidal type. The glands are straight and narrow, and the stroma dense. Following the post menstrual phase, the epithelium becomes higher and the glands become longer and more tortuous. Four or five days before the onset of menstruation, the endometrium becomes considerably thicker, and somewhat spongy, and not infrequently as much as seven or eight millimeters in thickness. The histological picture at this time shows the epithelium to be quite high, the glands become longer and convoluted, and the lining epithelium appears thrown up in eminences, the stromal cells often showing a marked hypertrophy.

The hypertrophy of the endometrium under certain conditions may be pronounced or excessive, and it must then be regarded as pathologic. The increase in the thickness of the mucous membrane is caused by the increase both in the glandular structure and the stroma. The growth of the glands is not uniform, some of them being small, some of them being markedly distended, lengthened and tortuous, so that on cross section they give the appearance of being greatly multiplied.

When the hypertrophy becomes extreme, the mucous membrane is thrown into folds, sometimes being large enough to form polyps. This marked increase in the endometrium is sometimes seen in connection with uterine misplacements, pelvis inflammation, repeated abortions, extra-uterine pregnancy, and sexual abuses. Frequently, the condition of endometrial hypertrophy however is seen when there is no other demonstrable pathology in the pelvis. Since we know from recent studies that the internal secretions of the ovary have a direct influence on the histological changes occurring in the mucous membrane of the uterus, it is logical to conclude that hypertrophy of the endometrium may

*Read before the Eighth District Medical Society, Madison, Ga., August 10, 1932.

be due to some disfunction of ovarian physiology.

Dr. Kelly in his latest text book on gynecology under the heading of "functional uterine bleeding" makes the following statement:

"The discovery of such a definite structural change as hypertrophy might well appear to remove the case from the category 'functional hemorrhage'; there is good reason to believe however, that the hypertrophy is not a primary lesion, but a sequel to the disturbed ovarian function, but normally, the endometrium is undoubtedly subordinate to the ovary."

If we believe that this disease is due to an ovarian disfunction, naturally, the treatment is to be directed to the ovary and not resort only to curettage. The most usual age in which endometrial hypertrophy occurs is near the menopause. The patient notices that her menstrual flow increases from three or four days to seven to ten days, and it might even last until the beginning of the next menstruation. There are usually no other symptoms except those due to secondary anemia, such as loss of weight, weakness, etc.

The diagnosis of endometrial hypertrophy can only be made by curetting and an examination of the scrapings. It is particularly important to curette these patients to be sure that the uterine bleeding is not produced by a malignant growth which so often occurs at the time of the change of life.

The treatment, par excellence, for uterine bleeding caused by endometrial hypertrophy is radium. Various drugs, such as ergot, hydrastin, and pituitrin, and ovarian extracts have been used, but have been found to be practically useless. X-ray treatment or hysterectomy are the only treatments besides radium which will result in a cure. Curetting will only give temporary relief. I do not approve of abdominal operations in these cases unless there is a contraindication to the use of radium. The mortality in hysterectomies will run about four per cent., it is necessary to hospitalize the patient from two to three weeks, the expenses for the surgeon, hospital and nurse, run quite high, and it is necessary for the patient to convalesce for several weeks after leaving the hospital. X-ray treatments are very effective and inexpensive, but the objection to using an X-ray is that it requires several treatments over a period of several weeks, and most important is the fact that the patient does not have the advantage of a positive diagnosis which can be made only by an examination of the tissue obtained from the curettage which is always done at the time of the introduction of

radium. In using radium in the uterus, it is only necessary for the patient to remain in the hospital three or four days, it requires only a short gas anesthetic, and there is absolutely no mortality. Radium has been accused of producing burns, and this was true in some cases before it was learned how to screen out the Alpha and Beta rays by the use of metals and obtain the use of only the Gamma rays which are the rays which give the therapeutic effect. If a carcinoma of the cervix has invaded the bladder and radium is used in massive doses of five or six thousand milligram hours, the cancerous tissue being destroyed, will slough out and result in vesico-vaginal fistula, but in treating endometrial hyperplasia with radium, it is only necessary to use about twelve-hundred milligram hours, and by keeping the bladder empty and the bladder and the rectum packed away from the uterus, there will be no burning resulting.

Report of Cases

Case 1.

Mrs. W. consulted me in October, 1929 and gave the following history:

For six years she had been menstruating from two to three weeks every month. She had had a cervical repair and curettement about two years before I saw her without any improvement. She had remained in bed a large part of the time for several years and had taken large quantities of various kinds of drugs. She had been advised to have a hysterectomy by another physician, but she was unwilling to undergo the operation and consulted me to see if I could not give her some other treatment. Upon examination, the pelvic organs showed no signs of pathology. Under anesthesia, she was curetted and twelve hundred milligram hours of radium were used. The patient left the hospital on the third day, and to the present time, she has had no recurrence of bleeding. She has been able to do her house work, and even do work in her yard and garden.

Case 2.

Mrs. C., age 40, consulted me and gave the following history:

She was curetted, due to excessive uterine bleeding, by another physician, at which time he found large quantities of endometrium. She was relieved of the bleeding temporarily, but had a recurrence in two months, at which time she was curetted again and the physician told me that he found a number of polyps. She was given twelve hundred milligram hours of radium, and left the hospital on the third day following treatment. Two weeks afterwards, she had a menstrual flow lasting three days, which often occurs following radium treatment, but for the last five months, she has had no uterine bleeding of any kind and has been in perfect health.

A STUDY OF THE CHRONIC HEPATIC ENTITIES—EXCEPT TUMORS*

J. J. PILCHER, M.D.
Wrens

The normal liver in an adult weighs from three to four pounds, and is the largest gland in the body. Fortunate for man that he has one, and unfortunate, we sometimes think, is that pitiable creature, who suddenly discovers it among his priceless possessions. From place to place he goes, from doctor to druggist, to quack and back again, in quest of some remedy for his biliousness, his torpid, tender swollen liver, seldom, if ever to find the cure he seeks. Are the symptoms so commonly heard the outbursts of a deranged mind, as our lack of sympathy might lead us at times to think, or, are they merely a derangement of hepatic function, or, may they not be but the rumblings of some one or more of the chronic liver diseases to which this study is directed, and about which we need more knowledge?

The liver certainly has several very important functions to perform, which may be briefly summarized as follows: "The secretion of bile; the storing of fat taken from the food, to be set free as required; the formation of glycogen from the carbohydrates of the food and certain constituents in proteins, and reconverting the glycogen into glucose as required for the nutrition of the body; the metabolism of proteins and the formation of urea; the destruction of red blood corpuscles; and, the rendering inert the poisons brought to it from the intestinal canal or other parts of the body."

Derangement of any one of these functions is a matter of much consequence to the health of the individual affected, and it is not easy to state, with positiveness, when a process is merely a derangement of function and when it represents some organic change in the liver itself. Disordered function may pass gradually into tissue or structural changes, so that these states seem to overlap each other at many points. It is also a fact that there may be considerable structural change before there is manifested functional disorder, with the maintenance of health for many years of active life, and, there may be extreme derangement of function without the presence of structural change. These disorders may be primary, or they may be secondary to disease elsewhere. For these reasons the chronic hepatic entities are most insidious in onset

and difficult of diagnosis, often existing for years without definite symptoms and entirely without the patient's knowledge.

Passive Hyperemia is perhaps the most striking illustration of liver disease due solely to disease elsewhere, as it is purely secondary to cardiac insufficiency, disorders of the lung and pleura, or pressure on the vena cava due to tumor, aneurism or spinal deformity. The congestion accompanying pneumonia, typhoid fever and other infections is temporary and does not give rise to permanent damage to the organ. The onset is gradual and the engorgement and morbid changes in the liver steadily advance in proportion to the etiological factor. The liver is markedly enlarged and tender, its volume liable to wide variations in keeping with fluctuation of the causative factor. Derangement of its several functions gives rise to marked gastro-intestinal disturbance and considerable auto-intoxication. The increased size of the liver is due to congestion of the blood vessels. It is bluish-red or brownish-red in color. In certain areas the interlobular vein is filled with dark blood, while the adjacent capillaries are empty and opaque, giving rise to a mottled appearance, or "nutmeg" liver. Several complications and sequelae may arise from this disordered condition—among them, jaundice caused mainly by pressure upon the fine biliary tubules by the distended veins; ascites from backward pressure in the portal circulation, from which accumulation of fluid and impaired circulation, peritonitis and perihepatitis have resulted; the kidneys may become congested and albuminuria become more or less constant. The liver finally becomes cirrhotic, ultimately losing its power of destroying toxic products to such an extent that stupor, delirium and coma may result.

General perihepatitis is one of the most rare with an etiology quite obscure. The average age of occurrence is about middle life, but it may occur from youth to old age, and is equally common to both sexes. That it is due to some type of streptococcal infection with mild and persistent action, there can be little doubt, with trauma, tight lacing, alcohol and arterio-sclerosis, etc., predisposing. Tuberculosis and syphilis have been advanced as causative factors, but when one considers the frequency of these two diseases, and the rarity of perihepatitis, together with the dissimilarity of the morbid changes, the theory would hardly hold, though it may be associated with syphilis, tuberculosis, empyema, gout, rheumatism, pericarditis, etc. So slow is the progress of the disease, that it may persist for years without the patient's knowledge

*Read before the Jefferson County Medical Society, Louisville, Ga., January 13, 1933.

until adhesions to adjacent structures, or decided thickening of the serous covering of the liver appear. Subjective symptoms are often quite vague, indefinite or entirely absent. The most characteristic symptom is the occurrence of ascites which always appears, and requires repeated tapping for many years, the operation having been reported performed more than three hundred times in the same patient. Between the tappings, there are often periods of fairly good health, when the person may be able to attend his usual vocation. Jaundice seldom, if ever, occurs—a reliable point in differential diagnosis between perihepatitis and cirrhosis of the liver with ascites. Though its progress is slow, true hyper-plastic perihepatitis invariably gets its victim, usually through some intercurrent affection, such as, peritonitis, pneumonia, pericarditis, empyema etc.

The surface of the liver is covered with a firm, glistening, whitish, fibrous coating, described as resembling the icing of a cake, hence the name "sugar iced liver". The organ is more or less deformed by the pressure and shrinking of this abnormal covering, though the biliary ducts are not involved which accounts for the absence of jaundice. The ascites is due to inflammation of the serous covering of the liver and peritonitis and not to compression of the portal vessels. The liver is soft, vascular and fatty with lobular atrophy, but this atrophy is not a true cirrhosis.

Tuberculosis of the liver is obviously caused by the *Bacillus Tuberculosis*, its most frequent channel of entry being the portal vessels, next the hepatic artery, and to the fetus from the placenta through the umbilical veins. The infection does not travel by way of the bile ducts. Seldom is any disease accompanied by fewer symptoms. There may be jaundice, there may be pain and ascites, but these symptoms are not diagnostic as peritonitis or infected glands could account for these symptoms. Pus-producing organisms may invade a tuberculous focus and abscess result. It is impossible to make a diagnosis of tuberculosis of the liver from liver symptoms alone, but if tuberculosis is known to exist in some other organ, one would be reasonably safe in guessing that the liver was involved should there be symptoms referable to the liver, such as, pain, swelling, jaundice, ascites or friction rub. The prognosis is most unfavorable, the liver involvement merely bringing a speedy termination to previous infection elsewhere in the body.

Syphilis of the liver may be congenital or acquired, the former occurring at, or, soon after birth, or, late, appearing between ten and twenty usually. The acquired cases make

their appearance between thirty and fifty. If the infection is severe, the child may die in-utero, be born with symptoms of the disease, or appear healthy at birth, soon to become affected. In the early congenital cases, jaundice and ascites are usually absent, but the liver and spleen are enlarged and tender. The child will be emaciated and anemic and show the presence of mucous membrane sores, skin eruptions and other stigmata of syphilis. The late congenital type presents symptoms and lesions characteristically tertiary. Jaundice or ascites usually occurs as result of gummata or syphilitic cicatrices. The spleen and liver are markedly enlarged. Acquired hepatic syphilis may resemble portal cirrhosis, perihepatitis, biliary hypertrophic cirrhosis, various types of liver tumor, amyloid disease, supuration of the liver when a gumma is infected, or gall stones if the ducts are obstructed by the syphilitic process. Like tuberculosis, a diagnosis of syphilis of the liver could hardly be made by the signs and symptoms arising from the liver alone, but if these are taken in conjunction with other evidences of the disease, together with the aid of the Wassermann reaction, the diagnosis can usually be made with certainty. Generally speaking, the prognosis of syphilis of the liver is gloomy, except in certain types of acquired cases, particularly that type in which the liver becomes involved during the progress of the disease.

Cirrhosis of the liver is a disease characterized by hyperplasia of the connective tissue, with a destruction, to a greater or less extent, of the parenchymatous cells, the liver being firmer in consistency. It occurs about middle life usually, though it may occur at any age. It is decidedly more common in males than in females, the ratio being about three to one. Alcoholism, chronic lead, silver and arsenic poisoning, passive hyperemia, syphilis, chronic malarial poisoning, rich diet, toxic and irritant bodies from the intestinal tract have all been suggested as causes. To say, cause unknown appears more sensible. In the atrophic variety, the liver is much smaller and harder than normal, though, in the early stage, the organ may be even increased in size, and its surface is usually roughened with small granulations or nodules; sometime, it is smooth. The onset is insidious, slow and progressive, however, occasionally it runs a rapid course, lasting only a few months. In the early stages, symptoms may be absent. The initial symptoms are due to obstructed portal circulation, producing chronic gastrointestinal catarrh. As the compression of the vessels increases, there is a compensatory dilatation of the collateral vessels, as manifested by hemorrhoids and the over-distended ab-

THE COUNTRY DOCTOR*

H. K. PHILLIPS, M.D.
Cleveland

dominal vein, especially pronounced around the umbilicus. For the same reason, there result gastric, intestinal or esophageal hemorrhages. The spleen is enlarged and ascites appears. Slight jaundice is present in about one fourth of the cases of this type. There is progressive loss of strength and weight, extending over a period of years, the average being from one to four, death relieving the agony in stupor, delirium and coma.

In the hypertrophic variety, jaundice is generally present because of some obstruction in the biliary vessels. The liver is enlarged, smooth and tender. There is usually no splenic enlargement, nor ascites, nor hemorrhoids. There is a marked reduction in the number of red blood cells, and an increase in the number of leukocytes. With regard to diagnosis, the clinical history may be all that one has for guidance in the early period of the disease, as the symptoms are too vague to be of much value.

Though volumes have been written about the chronic diseases of the liver, only some of the salient points have been brought to your attention in this paper, for, to give the etiological opinions in full, the symptomatology in detail, complete pathology and diagnosis would be tedious, tiresome and taxing to your patience, and, furthermore, after all is said and done, a mastery of the information at hand, would be of little or no value to the victim coming to you for aid, in-so-far as a cure is concerned.

No attempt will be made to outline any particular treatment in any member of this little group of big diseases, as the chief objects to be attained are the early recognition and removal of the cause; attention to those disorders to which liver involvement is secondary, and the relief of symptoms, which treatment will suggest itself as the emergency arises. While, it is regrettable that more cannot be done, there is much satisfaction in being able to give a measure of relief in these awful maladies, and make the victim's remaining days on this mortal sphere more comfortable.

Alice R. Bernheim, New York (*Journal A. M. A.*, April 1, 1933), states that the average American dietary is poor in calcium content. The calcium requirement is 0.7 Gm. of calcium (1 Gm. of calcium oxide) a day. General health is improved and recovery from disease aided when the optimal calcium supply and utilization are assured. Without milk or cheese in the diet it is difficult to obtain the needed calcium through food alone. Utilization of calcium is ineffectual, even with a sufficient calcium intake, unless the factors that control the absorption of calcium are also adequate.

I make no claim of scientific value for this paper, but hope it will prove of interest from historical and human interest standpoints. When I use the term "country doctor" I am speaking of the general practitioner of medicine whose work is in the village or rural community as distinguished from the practitioner in the large town or city.

One might conclude that, given the same mental capacity, the same incentive or will to achieve and the same training in medicine, the country doctor would develop in much the same way as his city brother, but such, I believe, is not the case. The usual equipment, the working conditions, the contacts, the whole environment and the problems in general of the two spheres of activity are so different, that the resulting personalities must also be quite different.

Obviously there are vast dissimilarities of character and personality in different individuals of any profession or in any walk of life. These dissimilarities are caused partly from inherited characteristics and qualities and partly from external impression and contacts. Under certain conditions one man may develop into a sublime egotist, and under the same conditions another may develop into a modest retiring individual, burdened with a multitude of inferiority complexes. In country doctors we undoubtedly find types representing these two extremes, as well as various intermediary types. The doctor who has developed into a sublime egotist, is the positive, energetic type, and usually has somewhat exaggerated opinions as to his own abilities and accomplishments. He may tell you that he has treated a large number of patients with typhoid or pneumonia without losing a patient, or that he has delivered a large number of babies without losing a baby or a mother or without seeing a perineal laceration. On the other hand, the man who has developed into the timid individual with inferiority complexes is of the negative, non-assertive type who underestimates or discounts his own abilities. He usually thinks that instead of being a doctor, he should have been a poet or a sign painter.

I have been a country doctor for nearly twenty years and have been interested in doctors as long as I can remember. During childhood I had the opportunity of knowing and observing country doctors in three dif-

*Read before the Hall County Medical Society, Gainesville, Ga., November 2, 1932.

(Continued on page 158)

THE JOURNAL

OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

APRIL, 1933

INVITATION

*To the members of the Medical Association
of Georgia*

Greetings:

The Macon Medical Society of Bibb County extends a most cordial invitation and welcome to the members of the Association, their wives and families, to meet with us in Macon for our annual State gathering. Various committees from our society are working now trying to arrange a program of entertainment that will enable all of us to forget the cares and worries that every man should leave behind him when he comes to Macon in May. We hope that every member of the Association will be able to spend at least one day with us. Our meeting place this year will be the new and spacious quarters in the Dempsey Hotel which we think will be one of the most convenient and satisfactory meeting places that the Association has ever had. Make your plans now to meet all of your friends in Macon. We assure you of a hearty welcome.

Thomas Harrold, M.D., *Pres.*
Macon Medical Society.

The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.

The Medical Association of Georgia will hold its Eighty-Fourth Annual Session at Macon, May 9, 10, 11, 12. Hotel Dempsey will be headquarters. All meetings of the Council, House of Delegates and scientific program will be held on the mezzanine floor. All commercial and scientific exhibits will be in the foyer on the same floor.

All meetings and entertainments will be featured by the loyalty and hospitality which have characterized many former meetings in Macon and the birth of the Association there in 1849.

Ample hotel facilities will be provided for all who may attend.

GROUP INSURANCE AND MEDICAL CARE

Much is now being written about various plans of group insurance to provide hospitalization or other plans to lower the cost of adequate medical care to people of moderate means. When these are the actual motives and purpose behind such plans they should receive the enthusiastic support of the medical profession. However, in considering any such plan two very definite principles should be kept in mind by the doctor.

First: No plan should be tolerated which is controlled entirely by laymen or purely business organizations. Such a condition would inevitably lead to undue control of the doctors by commercial enterprise and consequent eventual lowering of the quality of medical care or at least a commercialization of medical practice which is undesirable. The control and administration of the medical phase of such plans, whether for hospitalization or actual professional care should be in the hands of organized medicine, i. e., the doctors themselves and not the business men who sponsor the schemes for profit.

Second: The profession should not be driven by the stress of unusual conditions arising in the depression to adopt or sponsor plans which with the return of normal times or even with a continued depression will react to lower the quality of medical care or decrease the compensation for professional services. Medicine is not and never can be a purely business enterprise. We have and probably always will have to do altruistic or charity work. Let us not then, in attempting to shift the burden of at least part of their medical care to the low salaried group of patients, adopt any plan which will tend to cheapen medical service or make patients who are able to pay normal legitimate fees attempt to secure service at less than its actual cost or value. It is well, therefore, to carefully scrutinize any plan for emergency relief to see what its eventual effect will be upon the compensation for and quality of medical care.

J. C. M.

The American Medical Association will hold its Eighty-Fourth Annual Session in Milwaukee, June 12-16.



MARVIN M. HEAD, Zebulon
President 1932-3



CHAS. H. RICHARDSON, Macon
President-Elect 1932-3

OFFICIAL CALL

To the Officers, Fellows and Members of the American Medical Association:

The eighty-fourth annual session of the American Medical Association will be held in Milwaukee, Wisconsin, from Monday, June the twelfth, to Friday, June the sixteenth, Nineteen hundred and thirty-three.

The House of Delegates will convene on Monday, June the twelfth.

The Scientific Assembly of the Association will open with the General Meeting held on Tuesday, June the thirteenth, at 8:30 P. M.

The various sections of the Scientific Assembly will meet Wednesday, June the fourteenth, at 9 A. M. and at 2 P. M. and subsequently according to their respective programs.

Attest: Olin West, *Secretary*, Chicago, Ill.,
March the twenty-fifth

Edward H. Cary, *President*
Frederick C. Warnshuis
Speaker, House of Delegates

HOUSE OF DELEGATES

The House of Delegates will convene at 10:00 a.m. on Monday, June 12, 1933, in the Grand Ball Room of the Hotel Schroeder, 643 North Fifth Street.

REPRESENTATION

The apportionment of delegates made at the Philadelphia Session of 1931 entitles your State Association to three delegates for 1932-33-34.

"A member of the House of Delegates must have been a member of the American Medical Association and a Fellow of the Scientific Assembly for at least two years next preceding the session of the House of Delegates at which he is to serve."

"Delegates and alternates from constituent associations shall be elected for two years. Constituent associations entitled to more than one representative shall elect them so that one-half, as near as may be, shall be elected each year. Delegates and alternates elected by the sections, or delegates appointed from the United States Army, United States Navy and United States Public Health Service shall hold office for two years." —*Chap. I, Secs. 1 and 2, By-Laws.*

RULES FOR THE GUIDANCE OF THE COMMITTEE ON CREDENTIALS

Adopted by the House of Delegates at Atlantic City, N. J., June 6, 1912

1. Credentials shall be of two parts. The first part shall be sent to the office of the Secretary of the American Medical Association by the Secretary of the constituent association, not later than seven days prior to the first day of the first meeting of the House of Delegates, and shall be a list of delegates and alternates

for that association. The constituent associations shall designate an alternate for each delegate, who may take the pledge of the delegate when authorized to do so by said delegate in writing. In the absence of such authority, any alternate who has been duly chosen by the constituent association may be seated in place of any delegate who is unable to attend, provided he presents proper official authority from said association. A certificate signed by the president or secretary of the constituent association shall be deemed legal authority (*as amended June 7, 1921*).

2. Each delegate shall be furnished with a credential by the secretary of the association by which he is elected on a prescribed form furnished by the Secretary of the American Medical Association, which shall give the date and term for which he was elected and who was elected to act as alternate for him in case of his inability.

3. A delegate, on presenting himself to the Committee on Credentials, may be seated even though he may not present part 2 of his credentials, provided he is properly identified as the delegate who was elected by his association and whose name appears on the Secretary's record.

4. No alternate may be seated unless his credentials meet the same requirements as designated for the delegate and he can show written evidence that he is empowered by his delegate to act for him, except as provided for in Section 1 as amended (*as amended June 7, 1921*).

5. When a constituent state association reports that one of its elected delegates and his elected alternate are both unable to attend a specified annual session of the American Medical Association, the constituted authority of said constituent state association may fill the vacancies caused by the absence of both an elected delegate and his elected alternate, and such a substitute delegate or his substitute alternate who presents proper credentials signed by the president and secretary of said constituent state association shall be eligible to regular membership in the House of Delegates of the American Medical Association in such a specified session (*as adopted, May 12, 1932*).

SCIENTIFIC ASSEMBLY

The Opening General Meeting, which constitutes the opening exercises of the Scientific Assembly of the Association, will be held Tuesday evening, June 13, 1933, at 8:30. The Sections will meet on Wednesday, Thursday and Friday, June 14, 15 and 16.

Convening at 9:00 A.M. the Sections on
Practice of Medicine.

Obstetrics, Gynecology and Abdominal Surgery.

Laryngology, Otology and Rhinology.

Pathology and Physiology.

Orthopedic Surgery.

Urology.

Preventive and Industrial Medicine and Public Health.

Miscellaneous Topics.

Convening at 2:00 P.M. the Sections on
Surgery, General and Abdominal.

Ophthalmology.

Pediatrics.

Pharmacology and Therapeutics.

Nervous and Mental Diseases.

Dermatology and Syphilology.

Gastro-Enterology and Proctology.

Radiology.

REGISTRATION DEPARTMENT

The Registration Department will be open from 8:30 a.m. until 5:30 p.m. on Monday, Tuesday, Wednesday and Thursday, June 12, 13, 14 and 15, and from 8:30 a.m. to 12:00 noon on Friday, June 16, 1933.

PROGRAM MEDICAL ASSOCIATION OF GEORGIA Eighty-Fourth Annual Session Macon

HOTEL DEMPSEY, HEADQUARTERS

May 9, 10, 11, 12, 1933

Officers

President—Marvin M. Head, Zebulon.

President-Elect—C. H. Richardson, Macon.

First Vice-President—A. A. Morrison, Savannah.

Second Vice-President—D. H. Garrison, Tate.

Parliamentarian—John W. Simmons, Brunswick.

Delegates to the A. M. A.

William H. Myers (1933-4).....Savannah

Alternate, Wm. A. Mulherin.....Augusta

C. W. Roberts (1933-4).....Atlanta

Alternate, M. C. Pruitt.....Atlanta

O. H. Weaver (1932-3).....Macon

Alternate, C. K. Sharp.....Arlington

MACON MEDICAL SOCIETY

Officers

President—Thomas Harrold, Macon.

Vice-President—Wallace L. Bazemore, Macon.

Secretary-Treasurer—Leon D. Porch, Macon.

Delegate—O. H. Weaver, Macon.

Delegate—C. L. Ridley, Macon.

Alternate Delegate—Chas. C. Hinton, Macon

Alternate Delegate—Fred L. Webb, Macon.

COMMITTEES

Chas. H. Richardson, Macon, *General Chairman*

Arrangements

C. L. Ridley, Macon, *Chairman.*

A. R. Rozar, Macon.

J. D. Applewhite, Macon

O. H. Weaver, Macon.

Entertainment

G. Y. Massenburg, Macon, *Chairman.*

Fred L. Webb, Macon.

Wallace L. Bazemore, Macon.

Golf

C. L. Anderson, Macon, *Chairman.*

O. R. Thompson, Macon.

Transportation

C. H. Farmer, Macon, *Chairman.*

W. R. Golsan, Macon.
C. N. Wasden, Macon
Leon D. Porch, Macon.
A. M. Phillips, Macon.

Joint Committee with Woman's Auxiliary

Jas. A. Fountain, Macon, Chairman.
J. L. King, Macon.
Benjamin Bashinski, Macon.

Finance

H. C. Atkinson, Macon, Chairman.
T. H. Hall, Macon.
W. A. Newman, Macon.

Reception—Hotels

Thomas Harrold, Macon, Chairman.
W. W. Chrisman, Macon.
D. D. Watson, Macon.

COUNCIL

Chairman..... C. L. Ayers, Toccoa
Clerk..... M. M. McCord, Rome
Secretary..... Allen H. Bunce, Atlanta
First District..... Wm. H. Myers, Savannah
Vice-Councilor..... C. Thompson, Millen
Second District..... J. A. Redfearn, Albany
Vice-Councilor..... R. F. Wheat, Bainbridge
Third District..... J. C. Patterson, Cuthbert
Vice-Councilor..... Chas. A. Greer, Oglethorpe
Fourth District..... O. W. Roberts, Carrollton
Vice-Councilor..... W. H. Clark, LaGrange
Fifth District..... W. A. Selman, Atlanta
Vice-Councilor..... M. C. Pruitt, Atlanta
Sixth District..... K. S. Hunt, Griffin
Vice-Councilor..... A. H. Frye, Griffin
Seventh District..... M. M. McCord, Rome
Vice-Councilor..... W. H. Perkinson, Marietta
Eighth District..... H. M. Fullilove, Athens
Vice-Councilor..... M. A. Hubert, Athens
Ninth District..... C. L. Ayers, Toccoa
Vice-Councilor..... Grady N. Coker, Canton
Tenth District..... S. J. Lewis, Augusta
Vice-Councilor..... H. D. Allen, Jr., Milledgeville
Eleventh District..... J. E. Penland, Waycross
Vice-Councilor..... K. McCullough, Waycross
Twelfth District..... J. Cox Wall, Eastman
Vice-Councilor..... E. B. Claxton, Dublin

COMMITTEES

Scientific Work

Jas. E. Paullin, Chairman (1933)..... Atlanta
Wm. R. Houston (1934)..... Augusta
Chas. E. Waits (1935)..... Atlanta
Allen H. Bunce, Secretary-Treasurer..... Atlanta

Public Policy and Legislation

Dan Y. Sage, Chairman (1934)..... Atlanta
A. R. Rozar (1933)..... Macon
Grady N. Coker (1935)..... Canton
Allen H. Bunce, Secretary-Treasurer..... Atlanta
T. F. Abercrombie, Secretary, State Board of Health,
Atlanta.

Medical Defense

Frank K. Boland, Chairman (1933)..... Atlanta
Wm. A. Mulherin (1934)..... Augusta

J. O. Elrod (1936)..... Forsyth
C. L. Ayers, Chairman of Council..... Toccoa
Allen H. Bunce, Secretary-Treasurer..... Atlanta

Hospitals

R. H. Oppenheimer, Chairman (1937)..... Atlanta
G. Y. Massenburg (1933)..... Macon
K. McCullough (1934)..... Waycross
George F. Klugh (1935)..... Atlanta
Arthur D. Little (1936)..... Thomasville

Abner Wellborn Calhoun Lectureship

James E. Paullin, Chairman (1933)..... Atlanta
H. I. Reynolds (1934)..... Athens
Eugene E. Murphey (1935)..... Augusta
Craig Barrow (1936)..... Savannah
Frank K. Boland (1937)..... Atlanta

Necrology

A. J. Mooney, Statesboro, Chairman.
James M. Smith, Valdosta.
John T. McCall, Rome.

History: Sub-Committee

Frank K. Boland, Atlanta, Chairman.
William R. Dancy, Savannah.
Arthur G. Fort, Atlanta.

Crawford W. Long Memorial Prize

William R. Dancy, Savannah, Chairman.
Stewart R. Roberts, Atlanta.
V. P. Sydenstricker, Augusta.
George Bachmann, Atlanta.
Edgar R. Pund, Augusta.

Cancer Commission

J. L. Campbell, Atlanta, Chairman.
William H. Myers, Savannah.
Chas. H. Watt, Thomasville.
G. Y. Moore, Cuthbert.
E. R. Park, LaGrange
C. C. Harrold, Macon.
R. M. Harbin, Rome.
Stewart D. Brown, Royston.
M. B. Allen, Hoschton.
G. T. Bernard, Augusta.
James J. Clark, Atlanta.
Mrs. J. Bonar White, Atlanta (Representative of
Woman's Auxiliary).

Advisory Committee—Woman's Auxiliary

B. H. Minchew, Waycross, Chairman.
Marion T. Benson, Atlanta.
R. V. Martin, Savannah.
S. T. R. Revell, Louisville.
Arthur G. Fort, Atlanta.

*Fraternal Delegate to the Georgia Pharmaceutical
Association*

Wm. A. Mulherin, Augusta.

*Fraternal Delegate to the Georgia State Dental
Association*

M. E. Winchester, Atlanta.

Fraternel Delegates to Other State Meetings

To visit Alabama: Frank P. Norman, Columbus;
B. T. Wise, Americus.
To visit Florida: Arthur G. Fort, Atlanta; Albert F.
Saunders, Valdosta.

To visit North Carolina: Stewart R. Roberts, Atlanta; C. D. Whelchel, Gainesville.

To visit South Carolina: J. K. Quattlebaum, Savannah; C. C. Aven, Atlanta.

To visit Tennessee: H. C. Sauls, Atlanta; Thos. E. McBryde, Rockmart.

Committee for Study of Maternal Mortality and Infant Deaths

M. Hines Roberts, Atlanta, Chairman.

First District

Guy G. Lunsford, Millen.

A. J. Waring, Savannah.

Second District

I. M. Lucas, Albany.

S. L. Cheshire, Thomasville.

Third District

T. J. McArthur, Cordele.

J. C. Patterson, Cuthbert.

Fourth District

Thomas S. Bailey, Newnan.

S. C. Rutland, LaGrange.

Fifth District

C. B. Upshaw, Atlanta.

M. Hines Roberts, Atlanta.

Sixth District

E. F. Griffith, Eatonton.

J. D. Applegate, Macon.

Seventh District

P. O. Chaudron, Cedartown.

J. E. Lester, Marietta.

Eighth District

John W. Simmons, Brunswick.

G. T. Crozier, Valdosta.

Ninth District

C. L. Ayers, Toccoa.

D. H. Garrison, Tate.

Tenth District

S. S. Smith, Athens.

William A. Mulherin, Augusta.

Ex-Officio

T. F. Abercrombie, Atlanta, Director, Department of Public Health for Georgia

L. G. Hardman Loving Cup

W. A. Selman, Atlanta, Chairman.

William A. Mulherin, Augusta.

Chas. H. Watt, Thomasville.

William H. Myers, Savannah.

Chas. C. Harrold, Macon.

Allen H. Bunce, Atlanta.

*DELEGATES TO THE 1933 SESSION**

Baldwin.....Geo. L. Echols, Milledgeville

Bartow.....T. Lowry, Cartersville

Ben Hill.....

Bibb.....O. H. Weaver, Macon

C. L. Ridley, Macon

Blue Ridge.....

Brooks.....

Bulloch-Candler-Evans.....A. J. Mooney, Statesboro

Burke.....R. L. Miller, Waynesboro

Butts.....

Campbell.....

Carroll.....

Chatham.....

Chattooga.....

Cherokee.....Grady N. Coker, Canton

Clarke.....W. H. Cabaniss, Athens

Clayton-Fayette.....T. J. Busey, Fayetteville

Cobb.....J. E. Lester, Marietta

Coffee.....

Colquitt.....J. E. Lanier, Moultrie

Coweta.....

Crisp.....W. A. Miller, Arabi

Decatur-Seminole.....R. F. Wheat, Bainbridge

DeKalb.....

Dooly.....V. C. Daves, Vienna

Dougherty.....N. R. Thomas, Albany

Douglas.....D. Houseworth, Douglasville

Elbert.....D. N. Thompson, Elberton

Emanuel.....J. H. Chandler, Swainsboro

Floyd.....W. P. Harbin, Rome

Forsyth.....

Franklin.....

Fulton.....W. E. Barber, Atlanta

B. T. Beasley, Atlanta

Geo. W. Fuller, Atlanta

C. W. Roberts, Atlanta

Dan Y. Sage, Atlanta

W. Frank Wells, Atlanta

Glynn.....C. B. Greer, Brunswick

Gordon.....

Grady.....

Greene.....

Gwinnett.....

Habersham.....R. B. Lamb, Demorest

Hall.....C. D. Whelchel, Gainesville

Hancock.....

Hart.....W. E. McCurry, Hartwell

Henry.....E. G. Colvin, Locust Grove

Houston-Peach.....R. L. Cater, Perry

Jackson-Barrow.....

Jasper.....

Jefferson.....

Jenkins.....C. Thompson, Millen

Jones.....

Lamar.....

Laurens.....A. T. Coleman, Dublin

Lowndes.....W. W. Turner, Nashville

Macon.....C. P. Savage, Montezuma

Madison.....C. H. Bryant, Comer

Meriwether.....

Mitchell.....

Monroe.....

Montgomery.....

Morgan.....

Muscogee.....C. A. Dexter, Columbus

Newton.....

Ocmulgee.....W. A. Coleman, Eastman

Polk.....

Putnam.....

Rabun	
Randolph	E. C. McCurdy, Shellman
Richmond	G. Lombard Kelly, Augusta
	H. M. Michel, Augusta
Screven	
Spalding	W. C. Miles, Griffin
Stephens	
Stewart-Webster	J. M. Kenyon, Richland
Sumter	J. W. Chambliss, Americus
Taliaferro	
Tattnall	
Taylor	Lewis Beason, Butler
Telfair	F. R. Mann, McRae
Terrell	S. P. Kenyon, Dawson
Thomas	C. K. Wall, Thomasville
Tift	
Toombs	
Tri Society	C. K. Sharp, Arlington
Troup	M. M. Byrd, West Point
Turner	
Upson	
Walker	S. B. Kitchen, LaFayette
Walton	J. A. Pirkle, Monroe
Ware	C. M. Stephens, Waycross
Warren	A. W. Davis, Warrenton
Washington	J. R. Burdett, Tennille
Wayne	
Whitfield	Frank Easley, Dalton
Wilcox	J. M. McAllister, Rochelle
Wilkes	
Worth	W. C. Tipton, Sylvester

*This list includes the names of all delegates which have been reported to the Secretary-Treasurer.

ANNOUNCEMENTS

Meetings will be held in the Ball Room, Hotel Dempsey.

Be sure to go to the Registration Desk, present your 1933 card and procure a badge immediately on your arrival.

Discussion of papers is open to all members and guests of the Association. It is not limited to those named on the program.

On arising to discuss a paper the speaker will please announce his name and address clearly for the benefit of the Association and stenographer.

Meetings will be called to order at the hour fixed on the program. It is especially desired that the members be prompt in their attendance.

All manuscript should be typewritten, double spaced and on one side of the paper only. Papers must be handed to the Secretary immediately after being read.

IMPORTANT NOTICE!

Delegates must present written credentials to the Committee on Credentials from the House of Delegates to secure Delegates' Badges.

Members may not take part in the proceedings until they have registered and procured official badges.

PUBLIC MEETINGS

WEDNESDAY, MAY 10, 10:00 A.M.

Opening Meeting

BALL ROOM, HOTEL DEMPSEY

WEDNESDAY, MAY 10, 8:30 P.M.

Presentation of the "Badge of Service" to the President, Marvin M. Head, Zebulon, by Chas. E. Waits, Atlanta.

Ball Room Hotel Dempsey.

DIAGNOSIS AND TREATMENT OF SYPHILIS

Oliver C. Wenger

United States Public Health Service, Hot Springs, Arkansas

Ball Room, Hotel Dempsey

THURSDAY, MAY 11, 12:00 NOON

President's Address

The President's Address will be at an open session to which the public and visitors are invited.

MEMORIAL EXERCISES

A. J. Mooney, Statesboro,

Chairman, Committee on Necrology

ENTERTAINMENTS

TUESDAY, MAY 9, 10:00 TO 12:00 P.M.

Informal reception and dance, Ball Room of Hotel Dempsey. Sponsored by Woman's Auxiliary.

WEDNESDAY, MAY 10, 6:30 P.M.

Annual dinner of the alumni of Emory University School of Medicine, Hotel Dempsey.

Annual dinner of the alumni of the University of Georgia Medical Department, Hotel Dempsey.

WEDNESDAY AND THURSDAY, MAY 10, 11,
3:00 TO 6:00 P.M.

Golf Tournament at Idle Hour Club.

THURSDAY, MAY 11, 7:30 TO 12:00 P.M.

Buffet supper and dance at Idle Hour Club.

Trophies will be given winners in the Golf Tournament.

GEORGIA PEDIATRIC SOCIETY

The Georgia Pediatric Society will hold its annual meeting and dinner at Hotel Dempsey, Wednesday, May 10th, at 7:00 P.M.

MEETING OF THE COMMITTEE ON HISTORY

A meeting of the Committee on History will be held in Parlor "A" of Hotel Dempsey, Wednesday, May 10, at 9:00 A.M.

MEETING OF THE COUNCIL

The first meeting of the Council will be held in Parlor "A" Hotel Dempsey, Tuesday, May 9th at 6:00 P.M. Each Councilor will render a written report of conditions in each county of his district. Other meetings of the Council will be held at the call of the Chairman.

OFFICIAL REPORTER

The Master Reporting Company..... New York City

MEETING OF THE HOUSE OF DELEGATES

Parlor "A", Hotel Dempsey

TUESDAY, MAY 9, 2:30 P.M.

First meeting of the House of Delegates.

1. Call to order by the President.
2. Roll call.
3. Appointment of Reference Committee.
4. Report of officers:
 - President.
 - President-Elect.
 - Vice-Presidents.
 - Parliamentarian.
 - Secretary-Treasurer.
5. Report of Council by the Chairman.
6. Reports of committees:
 - a. Scientific Work.
 - b. Public Policy and Legislation.
 - c. Arrangements.
 - d. Medical Defense.
 - e. Hospitals.
 - f. Necrology.
 - g. Cancer Commission.
 - h. History.
 - i. Abner Wellborn Calhoun Lectureship.
 - j. Crawford W. Long Memorial Prize.
 - k. Advisory Committee—Woman's Auxiliary.
 - l. L. G. Hardman Loving Cup.
 - m. Study of Maternal Mortality and Infant Deaths.
 - n. Special Committees.
7. Report of Delegates to the A. M. A.
8. Report of Fraternal Delegates.
9. Unfinished Business.
10. New Business.

THURSDAY, MAY 11, 8:00 A.M.

Second meeting of the House of Delegates.

1. Call to order by the President.
2. Reading of minutes.
3. Reports of Committee.
4. Unfinished Business.
5. New Business.

PROGRAM

The papers for each meeting must be read as scheduled on the program.

WEDNESDAY, MAY 10, 1933

Ball Room, Hotel Dempsey

10:00 A.M.

Call to order by the President, Marvin M. Head, Zebulon.

INVOCATION

Rev. Randolph Claiborne..... Macon

WEDNESDAY, MAY 10, 10:00 A.M.

Scientific Papers

1. Congestive Heart Failure.
 - S. T. R. Revell, Louisville.
 - To lead the discussion:

E. A. Bancker, Jr., Atlanta.

Thos. E. Rogers, Macon.

2. The Proper Use of Iodine in Hyperthyroidism.
 - D. Henry Poer, Atlanta.
 - To lead the discussion:
 - Chas. E. Waits, Atlanta.
 - Chas. H. Watt, Thomasville.
3. Acrodynia—Its Etiology.
 - Henry D. Youmans, Lyons.
 - To lead the discussion:
 - Wm. A. Mulherin, Augusta.
 - A. J. Waring, Savannah.
4. Fibroid Tumors of Mesentery—Report of Case.
 - Olin H. Weaver, Macon.
 - To lead the discussion:
 - Geo. A. Traylor, Augusta.
 - T. P. Waring, Savannah.
5. Neurological Hazards of Spinal Anesthesia.
 - Wm. A. Smith, Atlanta.
 - To lead the discussion:
 - Chas. H. Richardson, Macon.
 - Geo. W. Fuller, Atlanta.

*Abner Wellborn Calhoun Lecture*THROUGH THE ALIMENTARY CANAL WITH THE
FLUOROSCOPE

Merrill C. Sosman, Boston, Mass.

WEDNESDAY, MAY 10, 2:30 P.M.

1. Collapse Therapy in the Treatment of Tuberculosis and Other Pulmonary Conditions.
 - M. F. Haygood, H. E. Crow, Kellie N. Joseph and Fred C. Wheelchel, Alto.
 - To lead the discussion:
 - Carl C. Aven, Atlanta.
 - C. O. Middlebrooks, Athens.
2. Diagnosis and Treatment of Aneurysms.
 - Jas. L. Campbell, Atlanta.
 - To lead the discussion:
 - J. Calvin Sandison, Atlanta.
 - Floyd W. McRae, Atlanta.
3. Dietary Deficiencies as Etiological Factors in the Psychoses and Psychoneuroses.
 - Jas. N. Brawner, Atlanta.
 - To lead the discussion:
 - R. C. Swint, Milledgeville.
 - Newdigate M. Owensby, Atlanta.
4. The Use of Acetarsone (Stovarsal) in the Treatment of Congenital Syphilis.
 - Joseph Yampolsky, Atlanta.
 - With Laboratory Colloboration,
 - Don F. Cathcart, Atlanta.
 - Inman Smith, Atlanta.
 - To lead the discussion:
 - Benjamin Bashinski, Macon.
 - M. Hines Roberts, Atlanta.
5. Bismuth Poisoning in the Treatment of Syphilis.
 - Jno. W. Brittingham, Augusta.
 - To lead the discussion:
 - Spencer A. Kirkland, Atlanta.
 - L. Minor Blackford, Atlanta.

6. Operative Technic and Postoperative Treatment of Fulminating Appendicitis.
Jno. T. McCall, Rome.
To lead the discussion:
Wm. L. Cooke, Columbus.
Kenneth McCullough, Waycross.

WEDNESDAY, MAY 10, 8:30 P.M.

Presentation of the "Badge of Service" to the President, Marvin M. Head, Zebulon, by Chas. E. Waits, Atlanta.

DIAGNOSIS AND TREATMENT OF SYPHILIS

Oliver C. Wenger

United States Public Health Service, Hot Springs, Arkansas.

THURSDAY, MAY 11, 9:00 A.M.

1. The Management of Chronic Arthritis.
Guy J. Dillard, Columbus.
To lead the discussion:
Lawson Thornton, Atlanta.
G. S. Murray, Columbus.
2. The Challenge to the General Practitioner.
J. Cox Wall, Eastman.
To lead the discussion:
Chas. H. Richardson, Macon.
Wm. A. Mulherin, Augusta.
J. C. Patterson, Cuthbert.
3. Symposium on Hypertension.
 - (a) Etiology.
Abner W. Calhoun, Atlanta.
 - (b) Pathology.
Edgar R. Pund, Augusta.
 - (c) Signs and Symptoms.
Wm. W. Chrisman, Macon.
 - (d) Complications.
V. P. Sydenstricker, Augusta.
 - (e) Treatment.
Thos. J. Charlton, Savannah.
To lead the discussion:
Chas. C. Hinton, Macon.
Roy A. Hill, Thomasville.
Steve P. Kenyon, Dawson.
Henry C. Sauls, Atlanta.
Henry T. Compton, Savannah.

THURSDAY, MAY 11, NOON

Ball Room, Hotel Dempsey

President's Address

Marvin M. Head, Zebulon

President, Medical Association of Georgia

MEMORIAL EXERCISES

A. J. Mooney, Statesboro

Chairman, Committee on Necrology

THURSDAY, MAY 11, 2:30 P.M.

1. Chronic Recurrent Migratory Colitis of the (Bargen) Diplostreptococcus Infection Type.

Hartwell Joiner, Gainesville.

To lead the discussion:

Marion C. Pruitt, Atlanta.

Wm. R. Dancy, Savannah.

2. Fistula in Ano—Lantern Slides.
George F. Eubanks, Atlanta.
To lead the discussion:
J. C. Patterson, Cuthbert.
W. Mayes Gober, Marietta.

3. Subacute Yellow Atrophy of Liver in Childhood.
Lantern Slides.
T. Bolling Gay, Atlanta.
To lead the discussion:
R. Cullen Goolsby, Jr., Macon.
Robt. G. McAliley, Atlanta.
Lon Grove, Atlanta.

4. Management of the Third Stage of Labor.
Chas. B. Upshaw, Atlanta.

To lead the discussion:

Otis R. Thompson, Macon.

Gordon Chason, Bainbridge.

5. Hypertrophic Pyloric Stenosis.

J. C. Brim, Pelham.

To lead the discussion:

Grady N. Coker, Canton.

Chas. E. Boynton, Atlanta.

6. Cancer of Larynx.—Motion Pictures.

Edward S. Wright, Atlanta.

To lead the discussion:

Benj. H. Minchew, Waycross.

Claude L. Penington, Macon.

FRIDAY, MAY 12, 9:00 A.M.

1. Aspiration and Air Replacement Method of Treating Empyema—Lantern Slides.
Thomas Harrold, Macon.
To lead the discussion:
Cleveland D. Wheelchel, Gainesville.
W. Arthur Selman, Atlanta.
2. Appendicitis Complicated by Adhesions and Bands—Lantern Slides.
Luther C. Fischer, Atlanta.
To lead the discussion:
Jno. W. Turner, Atlanta.
Bert Tillery, Columbus.
3. Diathermy in the Abortive Treatment of Pneumonia.
Wm. P. Harbin, Jr., Rome.
To be read by R. M. Harbin, Rome.
To lead the discussion:
Cyrus W. Strickler, Atlanta.
Hal M. Davison, Atlanta.
4. A report of 125 Prostatic Resections.
Lantern Slides.
Edgar G. Ballenger, Atlanta.
Omar F. Elder, Atlanta.
Harold P. McDonald, Atlanta.
To lead the discussion:
Jno. C. Keaton, Albany.
Milus K. Bailey, Atlanta.

5. Injection of Simple Hydroceles with the Newer Sclerosing Solutions.—(An experimental study).

Earl Floyd, Atlanta.

Jas. L. Pittman, Atlanta.

To lead the discussion:

Wallace L. Bazemore, Macon.

Wm. L. Champion, Atlanta.

6. Thrombo—Angiitis Obliterans.

Robt. L. Kennedy, Metter.

To lead the discussion:

Edgar F. Fincher, Jr., Atlanta.

Chas. W. Crane, Augusta.

7. Correlation of X-Ray Findings with Clinical Symptoms in Brain Lesions—Lantern Slides.

William F. Lake, Atlanta.

Amos J. Ayers, Atlanta.

To lead the discussion:

Jas. J. Clark, Atlanta.

J. Calvin Weaver, Atlanta.

All members of the Association are invited to take material to Macon for the Scientific Exhibit. Ample space will be provided for every one.

ELECTION OF OFFICERS

President-Elect.

First Vice-President.

Second Vice-President.

One delegate to the A. M. A.

One alternate delegate to the A. M. A.

Councilors for the First, Second, Third and

Fourth Districts.

Selection of meeting place for 1934.

CONSTITUTION AND BY-LAWS

Chapter II. Section 2. No papers or addresses before the Association, except those of the President and invited essayists, shall occupy more than fifteen minutes in their delivery; and no member shall speak longer than five minutes, nor more than once on any subject, provided that each essayist shall have five minutes in which to close the discussion of his paper.

Chapter VIII, Section 1. The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts' Rules of Order, when not in conflict with this Constitution and By-Laws.

Chapter VIII, Section 2. All papers read before the Association shall become its property. Each paper shall be deposited with the Secretary when read, and if this is not done, it shall not be published.

No miscellaneous or business matters will be discussed before the scientific sessions, but will be referred to the House of Delegates.

Resolution Adopted 1921

Resolved. That a member who sends in a title of a paper to be placed on the program and is not present to read the paper shall pay the penalty of not having an opportunity to appear on the program for two

years. Unless he presents an excuse acceptable to the Committee on Scientific Work.

We are instructed by the President to announce to all essayists that the session of the Scientific Program of the Association will begin on time, and that the above regulations of the By-Laws in reference to the program will be strictly enforced.

JAS. E. PAULLIN, *Chairman,*

WILLIAM R. HOUSTON,

CHAS. E. WAITS,

ALLEN H. BUNCE, *Secretary-Treasurer.*

Committee on Scientific Work.

IN MEMORIAM*

Anthony, Edwin R., Sr., Griffin, October 19, 1932.

Aycock, Mell, Atlanta, February 25, 1933.

Block, E. Bates, Atlanta, October 25, 1932.

Burford, Robt. E. L., Brunswick, December 1, 1932.

Burtz, Charles W., Acworth, September 18, 1932.

Caldwell, Allen Fort, Atlanta, November 10, 1932.

Cate, Gustavus V., Brunswick, October 2, 1932.

Chappell, Roy James, Dudley, November 22, 1932.

Christiphine, Samuel A. V., Attapulugus, February 22, 1933.

Cook, James Murray, Sardis, January 2, 1933.

Daniel, Benjamin E., Claxton, August 23, 1932.

Earnest, John Guilford, Atlanta, October 8, 1932.

Edenfield, William N., Vienna, April 17, 1933.

Edwards, Wanzie W., Butler, April 27, 1932.

Folks, William Morgan, Waycross, October 30, 1932.

Gammage, James T., Pineview, March 9, 1933.

Holland, Sterling Price, Blakely, May 29, 1932.

Horne, George Turner, Augusta, March 6, 1933.

Hull, Asbury, Augusta, November 4, 1932.

Johnson, Andrew J., Garfield, February 20, 1933.

Kershaw, Theodore Gourdin, Augusta, January 27, 1933.

Latimer, James H., Waycross, July 13, 1932.

Malone, William Harvey, Tallapoosa, September 11, 1932.

Matthews, Millard F., Athens, June 25, 1932.

McAfee, John Colbert, Macon, March 27, 1933.

Mobley, John William, Milledgeville, August 15, 1932.

Niles, George McCallum, Atlanta, June 5, 1932.

Noble, George H., Atlanta, October 29, 1932.

Pace, William Tatum, Smyrna, July 26, 1932.

Pate, Redding Hamilton, Unadilla, November 25, 1932.

Patterson, James W., Dawson, December 27, 1932.

Peacock, Elijah S., Harrison, April 15, 1933.

Pennington, James Edward, Esom Hill, February 12, 1933.

Poer, John M., West Point, November 15, 1932.

Quillian, Wiley H., Lula, September 9, 1932.

Respass, Herbert, Macon, August 6, 1932.

Ricketson, Francis B., Warrenton, March 26, 1933.

Riley, James Havis, Perry, August 22, 1932.

Rogers, Daniel Jefferson, Glennville, September 21, 1932.

Rogers, Robert Lee, Fairmount, December 18, 1932.

Tarver, Hugh R., Guyton, August 25, 1932.

Tucker, Charles L., Griffin, June 29, 1932.

Taliaferro, Valentine H., Eatonton, February 25, 1933.

Upchurch, Wilborn Arthur, Atlanta, March 27, 1933.

Wicker, Robert H., Rome, April 11, 1932.

Winship, Herring, Macon, December 30, 1932.

Williams, Beauregard, Pelham, October 26, 1932.

Williams, Franklin Edward, Vienna, April 25, 1932.

Vaughn, Charles J., Atlanta, July 21, 1932.

*This is the list of members who have died since our last annual session as it appears on our records. Please notify the Secretary-Treasurer of any errors or omissions.

CONSTITUTION AND BY-LAWS OF THE MEDICAL ASSOCIATION OF GEORGIA

Constitution

ARTICLE I.—NAME OF THE ASSOCIATION.

The name and title of this organization shall be the Medical Association of Georgia.

ARTICLE II.—PURPOSES OF THE ASSOCIATION

The purpose of this Association shall be to federate and bring into one compact organization the entire medical profession of the State of Georgia; to extend medical knowledge and advance medical science; to elevate the standard of medical education and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of state and medicine, so that the profession shall become more capable and honorable within itself, and more useful to the public, in the prevention and cure of disease, and in prolonging and adding comfort to life.

ARTICLE III.—COMPONENT SOCIETIES

Component societies shall consist of those county societies which hold charters from this Association.

ARTICLE IV.—COMPOSITION OF THE ASSOCIATION

Section 1. This Association shall consist of members and delegates.

Sec. 2. Members: The members of this Association shall be the members of the component county medical societies to which only white physicians shall be eligible.

Sec. 3. Delegates: Delegates shall be those members who are elected in accordance with this constitution and by-laws to represent their respective component societies in the House of Delegates of this Association.

ARTICLE V.—HOUSE OF DELEGATES

The House of Delegates shall be the legislative body of the Association, and shall consist of: (1) delegates

elected by the component county societies; (2) the officers of the Association enumerated in Section 1 of Article IX of the Constitution; (3) ex-presidents and delegates to the American Medical Association.

ARTICLE VI.—COUNCIL

The Council shall be the Board of Trustees and Finance Committee of the Association. The Council shall have full authority and power of the House of Delegates between annual sessions, unless the House of Delegates be called into session as provided in the Constitution and By-Laws.

It shall consist of the Councilors, the President, the President-Elect and the Secretary-Treasurer of the Association. Five of its members shall constitute a quorum.

ARTICLE VII.—SESSIONS AND MEETINGS

Section 1. The annual sessions shall take place on the second Wednesday in May at such place as shall be designated by the Association, provided that in case of conflict with the meeting of the American Medical Association the Council may change the date by publishing a notice in the Journal of the Medical Association of Georgia three months before the session.

Sec. 2. Special meetings of either the Association or the House of Delegates may be called by a two-thirds vote of the Council, or upon the petition of twenty delegates.

ARTICLE VIII.—SECTIONS AND DISTRICT SOCIETIES

Section 1. The House of Delegates may provide for a division of the scientific work of the Association into appropriate sections, and for the organization of such Councilor district societies as will promote the best interests of the profession such societies to be composed exclusively of members of component county societies.

ARTICLE IX.—OFFICERS

Section 1. The officers of this Association shall be a President, President-Elect, two Vice-Presidents, a Secretary-Treasurer, a Parliamentarian, and twelve Councilors, one from each congressional district of the state.

Sec. 2. The officers, except the Secretary-Treasurer, Parliamentarian and Councilors, shall be elected annually, provided that after the annual meeting of 1928 a President-Elect and not a President shall be elected annually. The President-Elect shall assume his office as President immediately after the next annual meeting following his election. The terms of the Councilors shall be for three years, as may be arranged, viz: the councilors from the first, second, third and fourth districts for three years; those for the fifth, sixth, seventh and eighth districts for two years; those for the ninth, tenth and eleventh districts for one year (1905); councilor from the twelfth district to be elected with the ninth, tenth and eleventh for the full term of three years. The Secretary-Treasurer shall be elected for a term of five years, and the Parliamentarian for a term of three years. All these officers shall serve until their successors are elected and installed.

Sec. 3. The officers of this Association shall be

elected by ballot at 12 o'clock noon on the third day of the annual session. Nomination for office shall be made orally, but the nominating speech must not exceed two minutes. The Councilors shall be elected at the same time, but on nomination by their respective District Societies at the annual meeting of such Societies preceding the meeting of the Association at which the vacancy occurs. If there is no election on the first ballot, the three names receiving the highest number of ballots shall be voted on, the other names being dropped. If there is no election on the second ballot, the two names receiving the highest number of ballots shall be voted on until an election occurs. Delegates to the American Medical Association shall be elected at the same time and in the same manner.

ARTICLE X.—FUNDS AND EXPENSES

Funds shall be raised by an equal per capita assessment on each component society. The amount of the assessment shall not exceed the sum of \$10.00 per capita per annum. Funds may be appropriated by the House of Delegates to defray the expenses of the Association, for publications, and for such other purposes as will promote the welfare of the profession. All resolutions appropriating funds must be approved by the Finance Committee before action is taken thereon. (Amended, May, 1929, page 482.)

ARTICLE XI.—RATIFICATION

The House of Delegates shall submit all questions before it to the Association for ratification.

ARTICLE XII.—THE SEAL

The Association shall have a common seal, with power to break, change or renew the same at pleasure.

ARTICLE XIII.—AMENDMENTS

Any amendment that may be offered to the Constitution shall lie over until the next annual session; and for its adoption at such session shall require a two-thirds vote of all present and voting.

By-Laws

CHAPTER I.—MEMBERSHIP

Section 1. The name of a physician on the properly certified roster of members of a component society, which has paid its annual assessment, shall be *prima facie* evidence of membership in this Association.

Sec. 2. Any person who is under sentence of suspension or expulsion from a component society or whose name has been dropped from its roll of members, shall not be entitled to any of the rights or benefits of this Association, nor shall he be permitted to take part in any of its proceedings until he has been relieved of such disability.

Sec. 3. Each member in attendance at the annual session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge which shall be evidence of his right to all the privileges of membership at that session. No member shall take part in any of the proceedings of an annual session until he has complied with the provisions of this section.

Sec. 4. Any member for old age, length of service, or other good reasons, may, upon recommendation of

the Board of Censors, be elected to honorary membership of his county society without dues. Such member shall be enrolled as an honorary member of his county society and the Association, and shall be entitled to all the privileges of the Association.

CHAPTER II.—GENERAL MEETINGS

Sec. 1. All registered members may attend and participate in the proceedings and discussions of the general meetings. Visitors duly accredited to represent the Association of other states, or of the District of Columbia, not exceeding two in number for each organization, may attend upon, and participate in the discussion of the general meetings, but shall not have a vote. Such delegates may read papers upon invitation of the Committee on Scientific Work. The general meetings shall be presided over by the President or by one of the Vice-Presidents.

Sec. 2. No papers or addresses before the Association, except those of the President and invited essayists, shall occupy more than fifteen minutes in their delivery; and no member shall speak longer than five minutes, nor more than once on any subject, provided that each essayist shall have five minutes in which to close the discussion of his paper.

Sec. 3. Entertainments. Any social entertainment which may be given by this Association shall be confined to the evening of the second day.

Sec. 4. Guests. Any physician not a resident of this state but a member of his state association, or any distinguished scientist not a physician, may be counted a guest during any annual session on invitation of the President, and shall be accorded the privilege of participating in the scientific work of that session.

CHAPTER III.—HOUSE OF DELEGATES

Section 1. The House of Delegates shall meet on the day preceding the first day of the annual session, the time to be fixed by the Committee on Scientific Work. It may adjourn from time to time as may be necessary to complete its business; provided that its hours shall conflict as little as possible with the general meetings. The order of business shall be arranged as a separate section of the program.

Sec. 2. Each component county society shall be entitled to send to the House of Delegates each year one delegate for every fifty members, and one for each fraction thereof, but each component society which has made its annual report and paid its assessment as provided in this Constitution and By-Laws shall be entitled to one delegate. Should the regular delegate from any county not be present at the meeting, the President shall appoint a substitute from that county to act.

Sec. 3. Twenty delegates present shall constitute a quorum.

Sec. 4. It shall, through its officers, council and otherwise, give diligent attention to and foster the scientific work and spirit of the Association, and shall constantly study and strive to make each annual session a stepping-stone to future ones of higher interest.

Sec. 5. It shall consider and advise as to the material interest of the profession, and of the public in those important matters wherein it is dependent on

the profession, and shall use its influence to secure and enforce all proper medical and public health legislation, and to diffuse popular information in relation thereto.

Sec. 6. It shall make careful inquiry into the condition of the profession of each county in the State, and shall have authority to adopt such methods as may be deemed most efficient for building up and increasing the interests in such county societies as already exist, and for organizing the profession in counties where societies do not exist. It shall especially and systematically endeavor to promote friendly intercourse among physicians of the same locality, and shall continue these efforts until if possible every physician in every county of the State has been brought under medical society influence.

Sec. 7. It shall encourage post-graduate and research work as well as home study, and shall endeavor to have the results utilized, and intelligently discussed in the county societies.

Sec. 8. It shall divide the State into councilor districts, one for each congressional district, and when the best interests of the Association and profession will be promoted thereby, organize in each a district medical society, and all members of component county societies and no others shall be members in such district societies.

Sec. 9. It shall have authority to appoint committees for special purposes from among members of the Association who are not members of the House of Delegates. Such committees shall report to the House of Delegates and may be present and participate in the debate thereon.

CHAPTER IV.—DUTIES OF OFFICERS

Section 1. The President shall preside at all meetings of the Association and of the House of Delegates; shall appoint all committees not otherwise provided for, and shall perform such other duties as custom and parliamentary usage may require. He shall be the real head of the profession of the State during his term of office, and as far as practicable, shall visit, by appointment, the various sections of the State and assist the Councilors in building up the county societies, and in making their work more practical and useful.

Sec. 2. The Vice-Presidents shall assist the President in the discharge of his duties. In the event of the President's death, resignation or removal, the Vice-Presidents, in their order, shall succeed him.

In order to give him a better opportunity of becoming more fully acquainted with his duties and with the needs of the Association, the President shall be elected one year prior to taking office. During this time he shall be known as President-Elect and shall be ex-officio member of the standing committees, and shall make recommendations at the next annual session. (Amended, May, 1930.)

Sec. 3. The Secretary-Treasurer shall give bond in the sum of One Thousand Dollars. He shall demand and receive all funds due the Association, together with the bequests and donations.

Sec. 4. The Secretary-Treasurer shall attend the

general meetings of the Association and the meetings of the House of Delegates, and shall keep the minutes of their respective proceedings in separate record books. He shall be ex-officio Secretary of the Council. He shall be custodian of all record-books and papers belonging to the Association. He shall provide for the registration of the members, delegates and accredited visitors at the annual session. He shall, with the cooperation of the secretaries of the component societies, keep a card-index register of all the legal practitioners of the State by counties, noting on each his status in relation to his county society, and on request transmit a copy of this list to the American Medical Association. He shall aid the Councilors in the organization and improvement of the county societies in the extension of the power and usefulness of this Association. He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties. He shall employ such assistants as may be ordered by the House of Delegates with the approval of the Association, and shall make an annual report to the Association. He shall supply each component society with the necessary blanks for making their annual reports; shall keep an account with the component societies, charging against each society its assessment and collect the same. Acting with the Committee on Scientific Work, he shall prepare and issue all programs. The amount of his salary shall be fixed by the Association. He shall be editor of the Journal of the Medical Association of Georgia. He shall employ such assistants as may be ordered by the Council or the House of Delegates. He shall annually make a report of his doings to the House of Delegates.

He shall furnish a balance sheet at each annual meeting for the past fiscal year to be published in the Journal. This shall consist of an itemized statement of all financial transactions of the past year, all accounts made, money received and from whom and all moneys disbursed, to whom, and for what purpose, with vouchers attached. A fiscal year includes the period of time between the first day of May and the last day of April.

CHAPTER V.—COUNCIL

Section 1. The Council shall meet on the day preceding the annual session and daily during the session, and at such other times as necessity may require, subject to the approval of the President. It shall meet on the last day of the annual session of the Association to organize and outline work for the ensuing year. It shall elect a chairman and clerk, who, in the absence of the Secretary of the Association, shall keep a record of its proceedings. It shall, through its chairman, make an annual report to the House of Delegates. It shall be the business body of the Association and attend to the business of the Association in the interim between meetings.

Sec. 2. Each Councilor shall be organizer and peacemaker for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist,

for inquiring into the conditions of the profession, and for improving and increasing the zeal of the county societies and their members. He shall make an annual report of his work and of the condition of the profession of each county in his district at the annual session of the House of Delegates. The necessary traveling expenses incurred by such Councilor in the line of the duties herein imposed may be allowed by the House of Delegates on a properly itemized statement, but this shall not be construed to include his expense in attending the annual session of the Association. Each Councilor may appoint a Vice-Councilor to assist him in the performance of his duties in that district.

Sec. 3. The Council shall be the board of censors of the Association. It shall consider all questions involving the right and standing of members, whether in relation to other members, to the component societies, or to this Association. All questions of an ethical nature brought before the House of Delegates or the general meeting shall be referred to the Council without discussion. It shall hear and decide all questions of discipline affecting the conduct of members of a component society, on which an appeal is taken from the decision of an individual Councilor, or to which attention has been called by the Councilor or interested members. It shall hear and decide all questions affecting unethical conduct on the part of any members at any annual session, and its decision in all such matters shall be final when ratified by the Association.

Sec. 4. In sparsely settled sections it shall have authority to organize the physicians of two or more counties into societies, to be suitably designated so as to distinguish them from district societies, and these societies, when organized and chartered shall be entitled to all rights and privileges provided for component societies until such counties shall be organized separately.

Sec. 5. The Council shall provide for and superintend the publication and distribution of all proceedings, transactions and memoirs of the Association, and shall have authority to appoint such assistants to the editor as it deems necessary. It shall manage and conduct the Journal of the Medical Association of Georgia, which is the organ of the Association, and all money paid into the treasury as dues shall be received as subscriptions to the Journal.

All money received by the Council and its agents, resulting from the discharge of the duties assigned to them, must be paid to the Secretary-Treasurer of the Association. As the Finance Committee it shall annually audit the accounts of the Secretary-Treasurer and other agents of this Association, and present a statement of the same in its annual report to the House of Delegates, which report shall also specify the character and cost of all the publications of the Association during the year, and the amount of all other property belonging to the Association under its control, with such suggestions as it may deem necessary. In the event of a vacancy in the office of the

Secretary-Treasurer, the Council shall fill the vacancy until the next annual election.

Sec. 6. All reports on scientific subjects and all scientific discussions and papers heard before the Association, shall be referred to the Journal of the Medical Association of Georgia for publication. The editor, with the consent of the Councilor for the district in which he resides, may curtail or abstract papers or discussions, and the Council may return any paper to its author which it may not consider suitable for publication.

Sec. 7. All commercial sessions shall be within the control and direction of the Council.

Sec. 8. In the absence of a Councilor and Vice-Councilor the President is empowered to appoint a representative from the district as acting Councilor, who shall have full rights and power of a Councilor.

Sec. 9. Each Councilor shall render at every session a written report of each county in his district.

Sec. 10. Any member of the Council who fails to attend two regular successive sessions of the Council, or whose district does not show evidence of the performance of his duties during the year, unless he renders an acceptable excuse to the Council, is subject to have his position declared vacant by the President and a successor appointed by the President.

CHAPTER VI.—COMMITTEES

Section 1. The standing committees shall be as follows:

A Committee on Scientific Work.

A Committee on Public Policy and Legislation.

A Committee on Arrangements.

A Committee on Medical Defense, and such other committees as may be necessary.

Sec. 2. The Committee on Scientific Work shall consist of four members of which the Secretary-Treasurer shall be one. The other three members shall be appointed for terms of one, two, and three years, respectively. The vacancy which will occur each year by the expiration of the term of one member shall be filled by the President with an appointment for three years. The member who has the shortest time to serve shall be Chairman. The committee shall determine the character and scope of the scientific proceedings of the Association for each session. Thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers, discussions and other business shall be presented.

This By-Law shall not prohibit the Committee on Scientific Work from inviting not more than two distinguished members of the national organization to deliver addresses or read papers at any annual meeting.

Sec. 3. The Committee on Public Policy and Legislation shall consist of three members and the President and Secretary, the Commissioner of Health of the State of Georgia, and a sub-committee of three members from each Councilor District appointed by the chairman when needed. It shall represent the Association in securing and enforcing legislation in the interest of public health and of scientific medicine.

It shall keep in touch with professional and public opinion, shall endeavor to shape legislation so as to secure the best results for the whole people, and shall strive to organize professional influence so as to promote the general good of the community in local, state and national affairs and elections.

Sec. 4. The Committee on Arrangements shall be appointed by the component society in which the annual session is to be held. It shall provide suitable accommodations for the meeting places of the Association and of the House of Delegates and, of their respective committees, and shall have general charge of all arrangements. Its chairman shall report an outline of the arrangements to the Secretary-Treasurer for publication in the program, and shall make additional announcements during the session as occasion may require.

Sec. 5. The Committee on Medical Defense shall consist of five members, of whom the Chairman of the Council and the Secretary-Treasurer of the Association shall be members. The other members, one of whom shall act as Chairman of the Committee, shall be elected by the Council for a period of five years. Those elected at this meeting (April 19, 1916), shall serve one, three and five years, respectively.

It shall be the duty of the Committee on Medical defense to investigate and defend all damage suits against the Medical Association of Georgia; to investigate all claims of civil malpractice made against its members; to take full charge of such cases, which after investigation, they decide to be proper cases for defense; to defend all such cases in the courts of last resort, to furnish General Counsel and pay court cost usual to such litigation, and reasonable fees for local attorneys as shall be arranged by General Counsel. Provided that any member who has indemnity insurance shall have such insurance bear its portion of the expense. However, they shall not pay, or obligate the Medical Association of Georgia to pay any judgment rendered against any member upon the final determination of any case. They shall be empowered to contract with such agents or attorneys as they may deem necessary for the proper carrying out of this By-Law. (Amended, May 14, 1931, page 359 of Journal.)

The assistance for defense, as herein provided, shall be available only to members of the Medical Association of Georgia in good standing. Any member who has not paid his annual dues by April 1st shall not be considered in good standing in the application of this By-Law.

Any member or members of the Association threatened with suit for civil malpractice shall immediately communicate with the Secretary of the Association and shall give full and complete information in reference to all the circumstances alleged in the complaint. The Secretary shall proceed immediately to investigate the circumstances reported and shall advise with the attorneys or agents employed by the Committee for this purpose. The member sued, or threatened with suit, shall be consulted and shall have the complete confidence of the Committee in all transactions con-

nected with the investigation in question. The Committee shall have the authority to require of a constituent society or the president thereof, the appointment of a committee of investigation in any such case, and it may direct the committee so appointed to report to the Committee on Medical Defense and not to the society from which it was appointed.

The Committee on Medical Defense may also, at its discretion, arrange to prosecute illegal practitioners in the State of Georgia and assist in the enforcement of the Medical Practice Act of his State.

CHAPTER VII.—COUNTY SOCIETIES

Section 1. All county societies now in affiliation with this Association, or those which may hereafter be organized in the State, which have adopted principles of organization not in conflict with this Constitution and By-Laws, shall on application, receive a charter from and become a component part of this Association.

Sec. 2. As rapidly as can be done after the adoption of this Constitution and By-Laws, a medical society shall be organized in every county in the State in which no component society exists, and charter shall be issued thereto.

Sec. 3. Charters shall be issued only on approval of the Council, and shall be signed by the President and Secretary of this Association. The Association shall have authority to revoke the charter of any component society whose actions are in conflict with the letter or spirit of this Constitution and By-Laws.

Sec. 4. Only one competent medical society shall be chartered in any county.

Sec. 5. Each county society shall judge of the qualifications of its own members, but as such societies are the only portals to this Association, every reputable and legally registered white physician who does not practice or claim to practice, nor lend his support to any exclusive system of medicine, shall be eligible to membership. Before a charter is issued to any county society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

Sec. 6. No matter what the unethical conduct or discipline of the members of the county society may be, both plaintiff and defendant shall have the right to appeal to the Council whose decision shall be final when ratified by the Association.

Sec. 7. In hearing appeals the Council may admit oral or written evidence, as in its judgment will best and most fairly present the facts, but in case of every appeal, both as a board and as individual Councilors in district and county work, efforts at conciliation and compromise shall precede all such hearings.

Sec. 8. When a member in good standing in a component county society moves to another county in this state, he shall be given a written certificate of these facts by the secretary of his society, without cost, for transmission to the secretary of the society in the county to which he moves. Such member shall be considered to be in good standing from the county society from which he was certified and in the Medi-

cal Association of Georgia to the end of the period for which his dues have been paid. (Amended, May, 1929, pages 476-7.)

Sec. 9. A physician living on or near a county line may hold his membership in that county most convenient for him to attend, on permission of the component society in whose jurisdiction he resides.

Sec. 10. Each component society shall have general direction of the affairs of the profession in its county, and its influence shall be constantly exerted for bettering the scientific, moral and material condition of every physician in the county; and systematic efforts shall be made by each member, and by the society as a whole, to increase the membership until it embraces every qualified physician in the county.

Sec. 11. At some meeting in advance of the annual session of this Association, each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Association, in the proportion of one delegate to each fifty members, or fraction thereof, and the Secretary of the society shall send a list of such delegates to the Secretary of this Association at least ten days before the annual session.

Sec. 12. The Secretary of each component society shall keep a roster of its members, and of the non-affiliated registered physicians of the county, in which shall be shown the full name, address, college and date of graduation, date of license to practice in this State, and such other information as may be deemed necessary. In keeping such roster the Secretary shall note any changes in the personnel of the profession by death, or by removal to or from the county, and in making his annual report he shall be certain to account for every physician who has lived in the county during the year.

Sec. 13. The Secretary of each component society shall forward its assessment, together with its roster of officers and members, list of delegates, and lists of non-affiliated physicians of the county, to the Secretary of this Association each year, thirty days before the annual session.

Sec. 14. Any county society which fails to pay its assessment, or make the report required, on or before April 1 of each year, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the Association, or of the House of Delegates, until such requirement has been met.

Sec. 15. The Secretary of each county society shall report to the Journal of the Medical Association of Georgia full minutes of each meeting and forward to it all scientific papers and discussions which the society shall consider worthy of publication.

CHAPTER VIII.—RULES AND ETHICS

Section 1. The deliberations of this Association shall be governed by parliamentary usage as contained in Roberts' Rules of Order, when not in conflict with this Constitution and By-Laws.

Sec. 2. All papers read before the Association shall become its property. Each paper shall be deposited with the Secretary when read, and if this is not done it shall not be published.

Sec. 3. The principles of medical ethics of the American Medical Association shall be those of this Association.

Sec. 4. Any member of this Association, on locating in a new place for practicing his profession may place his professional card, containing name, address, telephone number, and statement as to whether or not his practice will be limited to any particular class of disease, in the local paper for a period of not longer than one month. The placing of such card for this period of time shall not be considered unethical. The use of the word "specialist" by any member in connection with his name in any newspaper, telephone directory, or other public places, shall be considered unethical.

CHAPTER IX.—AMENDMENTS

These By-Laws may be amended at any annual session by a majority vote of the Association after the amendment has lain on the table for one day.

RESOLUTIONS, MEDICAL ASSOCIATION OF GEORGIA

1921

Resolved, That a member who sends in a title of a paper to be placed on the program and is not present to read the paper, shall pay the penalty of not having an opportunity to appear on the program for two years, unless he presents an excuse acceptable to the Committee on Scientific Work.

1922

Be it Resolved, That the House of Delegates recommend that the Committee on Scientific Work make available on the program of the State Association space for two papers from each Councilor district; that a definite time be assigned for reading and discussion of each of these papers, and they be given precedence over all other business. The said papers are to be selected by the Committee on Scientific Work, and, in case a writer does not respond when his name is called, some paper will be substituted and the schedule not deranged. The President ruled that this resolution is only a recommendation and not a law.

1928

Resolved, That the delegates to the A. M. A. elected at this and succeeding meetings of the Medical Association of Georgia be installed January 1st, following their election, and that their term of service run for two years thereafter. And be it further

Resolved, That our delegates be authorized to attend the regular and any called meeting of the House of Delegates of the American Medical Association during the term to which they are elected.

1929

Resolved, That the House of Delegates approve the increase of dues to \$7.00 per capita per annum.

Resolved, That the House of Delegates adopt the report of the Council authorizing the Committee on Public Policy and Legislation to spend the necessary amount of money to carry on its work.

Resolved, That in order to expedite the business of the House of Delegates, all reports of special and regular committees of the Association involving matters of public policy, legislation or appropriation of the

funds of the Association be submitted in writing to the Secretary of the Association a sufficient time in advance of the regular annual session, about March 15th, to permit of the publication of said recommendations either in the official program prior to the session or in a special circular that shall be mailed to the constituent societies, in order that the delegates may be advised of the proposed changes. (May, 1929, page 475.)

PROPOSED AMENDMENTS TO CONSTITUTION

Article IX, Section 1, be amended to read as follows: "Section 1. The officers of the Association shall be a President, President-Elect, two Vice-Presidents, a Secretary-Treasurer, a Parliamentarian, and one Councilor from each congressional district in the State."

Article IX, Section 2, be amended to read as follows: "Section 2. The officers, except the Secretary-Treasurer, Parliamentarian and Councilors, shall be elected annually, provided that after the annual session of 1928 a President-Elect and not a President shall be elected annually. The President-Elect shall assume office as President immediately after the next annual session following his election. The terms of the Councilors shall be for three years, as may be arranged, viz., the Councilors for the first, second, third, and fourth districts for three years; those for the fifth, sixth, seventh, and eighth districts for one year; those for the ninth and tenth districts for two years. The Secretary-Treasurer shall be elected for a term of five years, and the Parliamentarian for a term of three years. All these officers shall serve until their successors are elected and installed. (1933)."

Members—Proposed Amendment to By-Laws

By-Laws: Chapter I, Section 4, Membership. Proposed Amendment. It is proposed to amend Chapter I, Section 4, of the By-Laws of the Association by adding the following: "In addition to the regular paid and honorary members as now carried on the roster of constituent county societies and the Association; county societies may elect other members to be known as "affiliate, associate, graduate or interne" members. Such members may be elected by any county society without the payment of dues and reported to the Secretary-Treasurer of the Association. All such members shall be carried on the roster of members of the Association with the privilege of attending any and all meetings of county, district societies and the Association, but will not be eligible to vote, hold office or serve as committeemen in any of the constituent societies or the Association." All such members may be designated as "associate members" on the roster of members of the Association."

BOOKS RECEIVED

Criteria for the Classification and Diagnosis of Heart Disease, by the Criteria Committee of the Heart Committee of the New York Tuberculosis and Health Association, Inc. Joseph W. Bainton, M.D., Arthur C. DeGraff, M.D., Robert L. Levy, M.D., and Harold

E. B. Pardee, M.D., Chairman. Approved by the American Heart Association. Third edition. Contains 131 pages. Publishers: American Heart Association, 370 Seventh Avenue, New York City.

The Medical Secretary, by Minnie Genevieve Morse, Member Board of Registration of the Association of Record Librarians of North America, Author of "Case Records in Small Hospitals". Contains 162 pages. Publishers: The Macmillan Company, 60 Fifth Avenue, New York City. Price \$1.50.

Clinical Diagnosis, Physical and Differential, by Newton S. Stern, M.D., Associate Professor of Medicine, University of Tennessee School of Medicine, Memphis. Contains 364 pages. Publishers: The Macmillan Company, 60 Fifth Avenue, New York City. Price \$3.50.

Diseases of the Heart Described for Practitioners and Students, by Sir Thomas Lewis, M.D., Hon. D.Sc. (Michigan) Physician in Charge of Department of Clinical Research, University College Hospital, London; Physician in Chief (Pro tem.) Peter Bent Brigham Hospital, Boston; Honorary Fellow New York Academy of Medicine; Corresponding member Association of American Physicians and Interstate Postgraduate Medical Association. Contains 297 pages. Publishers: The Macmillan Company, 60 Fifth Avenue, New York City.

Laws (Abstracts) and Board Rulings Regulating the Practice of Medicine in the United States of America and Abroad. Forty-Second Edition. Compiled by the Council on Medical Education and Hospitals of the American Medical Association. Publishers: American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

Medical Clinics of North America. (Issued serially one number every other month). Volume 16, Number 5. (Baltimore Number—March 1933.) Octavo of 257 pages with 16 illustrations. Per clinic year July 1932 to May 1933. Paper, \$12.00; Cloth, \$16.00 net. Publishers: W. B. Saunders Company, West Washington Square, Philadelphia, Pennsylvania.

Illustrated Primer on Fractures. Prepared by the Cooperative Committee on Fractures under auspices of the Section on Surgery, Abdominal and General, and Section on Orthopedic Surgery in cooperation with Department of Scientific Exhibit of the American Medical Association. Third edition. Publishers: American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

"The Hebrew Physician." The third issue of "The Hebrew Physician" (Harofeh Hoibri), the only Hebrew Medical Journal published outside of Palestine, edited by Dr. Moses Einhorn, has just made its appearance.

WOMAN'S AUXILIARY

OFFICERS

President—Mrs. S. T. R. Revell, Louisville.
 President-Elect—Mrs. J. Bonar White, Atlanta.
 First Vice-President—Mrs. N. Peterson, Tifton.
 Second Vice-President—Mrs. C. Thompson, Millen.
 Third Vice-President—Mrs. J. W. Simmons,
 Brunswick.

Recording Secretary—Mrs. J. E. Penland, Waycross.
 Corresponding Secretary—Mrs. F. B. Rawlings,
 Sandersville.
 Treasurer—Mrs. Chas. Usher, Savannah.
 Parliamentarian—Mrs. Charles Hinton, Macon.
 Editor—Mrs. C. W. Roberts, Atlanta.

INVITATION

To the Members of the Woman's Auxiliary:

The Woman's Auxiliary to the Bibb County Medical Society extends a most cordial invitation to the members of the Woman's Auxiliary to the Medical Association of Georgia to attend the ninth annual session of the Auxiliary to be held at Hotel Dempsey, Macon, May 9th to 12th, 1933.

The Bibb County Auxiliary offers the warmest welcome to all who will attend the coming session and hopes that you will not only be present at the business meetings but will also attend and enjoy all entertainments that have been planned for your pleasure.

Faithfully yours,

Mrs. Wallace Bazemore, *Pres.*
 Woman's Auxiliary
 Bibb County Medical Society.

IMPORTANT NOTICES

The wives of all physicians attending the annual session of the Medical Association of Georgia are urgently invited to participate in the following program whether they are members of the Woman's Auxiliary or not.

All who expect to attend the meetings of the Auxiliary are requested to register at Hotel Dempsey immediately upon their arrival in the city.

The registration fee is one dollar for members of the Auxiliary and others who attend the meetings. This fee includes the luncheon on Wednesday, May 10th.

There are no additional fees for any other entertainments for the members of the Auxiliary.

Non-members who desire to enjoy the other social functions will be expected to pay a small amount for their tickets to these various affairs. These tickets can be secured at the Registration Desk.

As you all know, Macon has long been noted for her gracious hospitality and everything possible is being done to make this convention one of the most successful and inspiring meetings that we have ever had.

Your President sincerely hopes that every member of the Auxiliary will avail herself of the privilege of being present.

Most cordially,

MRS. S. T. R. REVELL, *President*,
 Woman's Auxiliary, Medical Association of Georgia.

PROGRAM

Ninth Annual Session

WOMAN'S AUXILIARY

TO THE

MEDICAL ASSOCIATION OF GEORGIA

Macon, Georgia

May 9th-12th, 1933

Hotel Dempsey, Headquarters

Tentative Program

TUESDAY, MAY 9TH

Registration.....Hotel Dempsey
 Executive Committee Meeting—8:30 P.M.....
Hotel Dempsey
 Informal Reception—9:30 to 12:00 P.M.....
Hotel Dempsey

WEDNESDAY, MAY 10TH, 10:00 A.M.

Meeting of Executive Committee and Delegates.

Invocation—Rev. W. R. Mackay, Pastor of First Presbyterian Church.

Greetings—Mrs. Wallace Bazemore, President, Woman's Auxiliary to the Bibb County Medical Society.

Introduction of Distinguished Guests.

Report of Entertainment Committee, Mrs. J. L. King, Chairman.

Reading of Minutes.

Report of Credentials Committee, Mrs. J. D. Applewhite, Chairman.

Address—Dr. Marvin M. Head, President of the Medical Association of Georgia.

Address—Dr. B. H. Minchew, Chairman of Advisory Council.

Music—"Bird Song," from Pagliacci, by R. Leoncavallo. Soloist, Mrs. Ray Carter. Accompanist, Mrs. Raleigh M. Drake.

Reports of District Managers.

Address—"The Woman's Auxiliary as a Means of Contact Between Lay Organizations and the Medical Association of Georgia," Dr. Joe P. Bowdoin, Assistant Director of the Department of Public Health.

Address—"What It Means to Have an Authentic Health Educational Program Prepared by the Medical Association of Georgia," Mrs. R. H. Hankinson, President, Georgia Congress of Parents and Teachers.

Address—"Co-operation of the Medical Association and its Woman's Auxiliary With the Georgia Federation of Women's Clubs," by the President or Chairman of Health.

Reports of County Auxiliaries.

Music.

Report of Chairman of Executive Board.
 Address—"Students' Educational Loan Fund."
 Appointment of Special Committees.
 Showing of Health Film, "The Priceless Gift of Health," Mrs. J. A. Selden, Macon.
 Adjournment.
 Luncheon—2:00 P.M.-----Hotel Dempsey
 Progressive Teas—5:30 P.M.-----

Hostesses

Mrs. James Fountain, Shirley Hills; Mrs. Wallace Bazemore, Vineville.

WEDNESDAY, 8:00 P.M.

Open Session-----Municipal Auditorium

THURSDAY, MAY 11TH, 10:00 A.M.

Annual Meeting

Invocation—Dr. Ed. F. Cook, Pastor of Vineville Methodist Church.
 Address of Welcome—Mrs. C. C. Harrold, Macon.
 Response—Mrs. C. W. Roberts, Atlanta.
 Memorial Service—Mrs. Wm. H. Myers, Savannah.
 Address—Dr. Chas. H. Richardson, President-Elect Medical Association of Georgia.
 "Jane Todd Crawford Memorial"—Mrs. C. C. Hinton, Macon.
 Minutes.

President's Report—Mrs. S. T. R. Revell, Louisville.
 President-Elect's Report—Mrs. J. Bonar White, Atlanta.

First Vice-President's Report—Mrs. N. Peterson, Tifton.

Second Vice-President's Report—Mrs. Cleveland Thompson, Millen.

Third Vice-President's Report—Mrs. J. W. Simmons, Brunswick.

Corresponding Secretary's Report—Mrs. F. B. Rawlings, Sandersville.

Treasurer's Report—Mrs. Charles Usher, Savannah.

Auditor's Report—By Chairman.

Music, "Vissi D'Arte" from Tosca, by Puccini. Soloist, Mrs. A. J. Johnson, Jr. Accompanist, Mrs. Fred Jones.

Report of the Meeting of the Woman's Auxiliary to the Southern Medical Association—Mrs. J. Bonar White.

Report of Chairman of Press and Publicity—Mrs. C. W. Roberts.

Report of Chairman of Health Films—Mrs. J. A. Selden.

Report of Chairman of Student's Loan Fund—Mrs. Wm. Shearouse.

Report of Chairman of Public Policy and Legislation—Mrs. Dan Y. Sage.

Report of Chairman of Citizenship for Medical Legislation—Mrs. F. G. Hodgson.

Report of Chairman of Revision Committee—Mrs. Ralston Lattimore.

Report of Chairman of Resolution Committee.

Report of Chairman of Courtesy Committee.

Report of Chairman of Nominating Committee.

Election of Officers.

Installation of President, Mrs. J. Bonar White.

Introduction of New Officers.

Adjournment.

THURSDAY, MAY 11TH, 7:30 P.M.

Supper Dance-----Idle Hour Country Club

FRIDAY, MAY 12TH

Meeting of New Board.

NINTH DISTRICT MEETING

The regular semi-annual meeting of the Woman's Auxiliary to the Ninth District Medical Society met at Gainesville, March 15th. Twenty-three members were present.

Invocation by Mrs. J. C. Bennett, Jefferson.

Address of Welcome by Mrs. R. L. Rogers, Gainesville.

Response to Address of Welcome by Mrs. J. H. Terrell, Toccoa.

Two papers by the President, Mrs. S. T. R. Revell, Louisville, were read.

Dr. Marvin M. Head, Zebulon, President of the Medical Association of Georgia, and Dr. Hal M. Davison, Atlanta, spoke on the value of the Woman's Auxiliary and duties of its members.

Mrs. L. G. Hardman, Commerce, presented the Auxiliary a book on the life, discoveries and teachings of Dr. Louis Alexander Dugas.

The quota assigned the Ninth District for subscriptions to Hygeia was over-subscribed.

Reports were made by the officers of their respective counties.

Mrs. J. H. Downey, Gainesville, gave a review of the History of the Auxiliary.

Officers elected for the ensuing two years were:

Mrs. W. R. Garner, Gainesville, Manager.

Mrs. D. H. Garrison, Tate, Assistant Manager.

Mrs. R. L. Rogers, Gainesville, Secretary.

Mrs. J. H. McClure, Cornelia, Parliamentarian.

Mrs. S. T. Ross, Winder, Scrap Book Chairman.

The meeting adjourned for the members to join their husbands for lunch at the Dixie Hunt Hotel.

MRS. W. H. GARRISON, *Secretary*.

Clarkesville, Ga.

FIRST DISTRICT MEETING

The Woman's Auxiliary to the First District Medical Society met at the home of Mrs. W. E. Floyd, Statesboro, February 21st.

Program consisted of the following:

Invocation.

Address of Welcome by Mrs. R. L. Cone, Statesboro.

Response to the Address of Welcome by Mrs. Guy Lunsford, Millen.

Reading of Minutes.

Report of Secretary-Treasurer.

Reports from County Auxiliaries.

Report Scrap Book Chairman, Mrs. W. H. Myers, Savannah.

Report of Student Educational Loan Fund, Mrs. William Shearouse, Savannah.

(Continued on page 150)

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*OBSERVATIONS UPON THE MORBIDITY
REPORTING AREA OF THE UNITED
STATES PUBLIC HEALTH SERVICE

With the development of preventive medicine and modern public health a new aid for the physician has come into existence. The physician is quite naturally interested in the prevention of disease and the amount of disease in his community, and he is particularly charged with the care of those who fall victims of communicable diseases. It is, however, quite impossible for him individually to measure the effect of such diseases upon population groups outside his own community; and if the community in which he lives is densely populated, it becomes increasingly difficult, as the population increases, for him to determine the effect of communicable diseases even in the area where he works constantly and where his interests are more directly concerned.

It is apparent that unless some outside agency assists him in combining the notifiable disease data from physicians in other localities, and in his own community, if it is densely populated, he will be at a loss to determine the amount of such disease anywhere at any time. It is tremendously important that the physician keep himself informed of the prevalence of disease in his own community and elsewhere if he expects to maintain his exalted position in his own community at the highest point of efficiency. Again he may learn from others what has been done to decrease the amount of disease in their communities, if reductions have actually occurred, or what factors have been responsible for increase of disease, where increases have occurred. In other words, the physician should be kept informed as to what is happening about him, among neighboring communities, the State, the United States and the world with respect to the prevalence of disease.

In order that the physician may be furnished with current and past information upon the prevalence of disease, local, state, and Federal governments have set up divisions of communicable diseases and epidemiology. Local health officers assume responsibility for this work in smaller communities, but in larger cities a separate division of the local health department may, and in many instances, has been established. Most states and the Federal Government maintain separate divisions for the assembling and distribution of data relative to the incidence of preventable diseases.

Insofar as the practical good that may come to the physician as a result of local, state, and Federal machinery for the tabulation of notifiable diseases, it is now possible for physicians and health workers to obtain the incidence of notifiable diseases at any given time throughout the civilized world. In a practical way this is made possible by the physician himself.

The amount of disease in any area in Georgia is determined by the reporting of same to the local health authorities in health officer counties, and directly to the State Division of Epidemiology in non-health officer counties. Local health officers report to the State Division of Epidemiology, and the State Health Officer reports the incidence of all notifiable diseases to the United States Public Health Service in Washington, which, in turn, reports to the Public Health Section of the League of Nations in Geneva. The League of Nations correlates reports from every civilized country and issues reports and bulletins, so that it is possible at any time to compare reports from various countries with reference to the prevalence and incidence of disease throughout the world.

Since it is true then that data with reference to the incidence of notifiable diseases is received by the League of Nations for tabulation and distribution throughout the world, it is likewise true that accuracy of these reports has a direct relation to the accuracy and care with which physicians throughout the world report diseases attended by them. In order that reporting of notifiable disease may be more complete and for the safety of the public, practically all states have passed laws requiring reporting of such diseases wherever knowledge of such is known to exist by either physician or layman. Georgia has such a law.

Of still greater significance and hope for improvement in reporting generally is the fact that the United States Public Health Service is endeavoring to standardize reporting throughout the United States through the establishment of the Morbidity Reporting Area. The standardization of morbidity reporting is of importance to physicians in this country and throughout the world. For instance, of what real value would morbidity reports from Georgia on scarlet fever or diphtheria be to a physician, let us say in England, unless this physician has some means of knowing with what degree of completeness diseases are reported in Georgia? Our hypothetical English physician might want to compare morbidity conditions in Georgia with several other states, for instance California and New York. Reports from the League of Nations or some other source might indicate that Georgia has a lower morbidity rate from typhoid or scarlet fever than California or New York, but in reality this might be due entirely to poor reporting. If this were the case, our physician would obtain a distorted idea of the relative incidence of typhoid and scarlet fever in the several states. As a matter of fact, in any area where preventable diseases are poorly reported by physicians and the populace, the statistician and epidemiologist will expect, other things being equal, actually a higher rate than in a similar area where reporting is prompt and effective.

It is believed that physicians of this state will be interested to learn more about the Morbidity Report-

ing Area which has been recently established by the United States Public Health Service. Doctor R. C. Williams, Assistant Surgeon General of the United States Public Health Service, who has been instrumental in the establishment of such an area, states the Morbidity Reporting Area was established "to encourage reporting of notifiable diseases and to secure certain and fairly comparable reports from the several states."¹

The requirements for admission to the Morbidity Reporting Area are as follows:

1. The state must be included in the registration area of births and deaths.
2. There must be adequate legislation to enforce reporting.
3. There must be machinery for securing reports and keeping records.
4. There must be a clerical force to do the work required.
5. There must be willingness to co-operate in efforts to secure more nearly accurate and complete reports of notifiable diseases.
6. The state must secure at least as many cases per death as the average number reported by states in the registration area for deaths for the preceding three years for five diseases—diphtheria, measles, scarlet fever, typhoid fever, and whooping cough.

TABLE NO. I
Comparative Percentage Rating of States—Five
Diseases—1928-1930
(Average—100 per cent)

States rated Standard— Above the average number of cases for each death.		States rated Below Stand- ard—Below the average number of cases for each death.	
Per Cent		Per Cent	
California	147	Alabama	61
Connecticut	174	Arizona	51
District of Columbia	183	Arkansas	41
Illinois	118	Colorado	83
Kansas	141	Delaware	89
Maine	110	Florida	62
Maryland	150	Georgia	36
Massachusetts	162	Idaho	83
Michigan	108	Indiana	67
Minnesota	152	Iowa	63
Mississippi	133	Kentucky	30
Montana	118	Louisiana	60
New Jersey	143	Missouri	70
New York	147	Nebraska	91
North Carolina	116	New Hampshire	77
Ohio	120	North Dakota	88
Oregon	134	Oklahoma	52
Pennsylvania	118	Tennessee	57
Rhode Island	102	West Virginia	67
South Carolina	107	States for which compar- able data for the three years were not available.	
Utah	199		
Vermont	190		
Virginia	125		
Washington	201		
Wisconsin	196	Nevada	
Wyoming	102	New Mexico	
		South Dakota	
		Texas	

TABLE NO. II—GEORGIA

Diseases and Year	Cases Reported	Deaths Regis- tered	Cases Reported per Death Registered		Per Cent of Standard	Average (Per Cent)
			Georgia	Registration Area (Standard)		
Diphtheria						
1928	862	232	3.653	10.930	33	
1929	757	181	4.182	10.929	38	
1930	758	145	5.228	11.259	46	
Yearly average per cent, diphtheria						39
Measles						
1928	4781	151	31.662	93.563	34	
1929	1188	31	38.323	124.106	31	
1930	4751	139	34.180	109.752	31	
Yearly average per cent, measles						32
Scarlet Fever						
1928	1000	33	30.303	77.439	39	
1929	1069	41	26.073	73.073	36	
1930	1186	39	30.410	76.094	40	
Yearly average per cent, scarlet fever						38
Typhoid Fever						
1928	1061	454	2.337	4.760	49	
1929	899	347	2.591	4.689	55	
1930	1126	505	2.230	4.724	47	
Yearly average per cent, typhoid fever						50
Whooping Cough						
1928	778	164	4.744	25.863	18	
1929	1770	289	6.125	27.052	23	
1930	1293	258	5.012	29.294	17	
Yearly average per cent, whooping cough						19
Final Average of Yearly Averages for Five Diseases						36

With reference to Georgia it is believed that the state can qualify with every requirement except number 6. Because of failure to qualify under number 6 the state has been rated "below standard" up to the present

time. As seen in requirement number 6, ratings are based upon fatality ratios. For the sake of clarification, it may be stated that the fatality ratio is the number of cases reported for each death.

Table No. 1 has been prepared by Doctor R. C. Williams of the United States Public Health Service, and it is believed that its publication will be of interest to Georgians everywhere. Not only has Georgia failed to qualify, but it may be seen that, with the exception of one state, morbidity reporting is at a lower ebb in Georgia than elsewhere in the United States. Table No. II includes data from Georgia upon which the last rating was made by the United States Public Health Service.

It is believed that Tables Nos. I and II illustrate several important facts for consideration of physicians and health workers throughout the state: (a) morbidity reports are classified and tabulated by the State Department of Health and sent regularly (weekly) to the United States Public Health Service for final tabulation; (b) failure to report notifiable diseases does not actually, in final tabulation and rating, indicate a lower incidence of disease, but on the contrary illustrates a low ebb of reporting, and hence to a degree invalidates the value of morbidity data from states rated "below standard"; and (c) since it is largely the physicians of Georgia who at present may make possible Georgia's admission to the Morbidity Reporting Area, it is believed and hoped that a direct appeal to them through this Journal may bring about the desired result.

It may be stated that considerable improvement in morbidity reporting in Georgia has been shown for 1932 over 1931. In 1931, 36,150 cases of preventable diseases and in 1932 50,993 were reported to the Division of Epidemiology of the State Health Department. The number of cases reported due to most of the notifiable diseases have shown increases. typhoid and tuberculosis are illustrative:

	Number of Deaths		Death Rates Per 100,000 Population		Cases Reported	
	1931	1932	1931	1932	1931	1932
Tuberculosis	2,165	1,927	73.7	65.1	1,691	3,321
Typhoid Fever	513	362	17.5	12.2	1,226	1,799

Examination of these figures indicates that while the death rates from tuberculosis and typhoid fever decreased in 1932 over 1931, the number of cases of tuberculosis reported were increased by 1,630, and from typhoid fever by 563 over 1931. Morbidity reporting over the state has undoubtedly improved. Several factors are possibly responsible for this improvement, among them being renewed efforts on the part of the local and State Health Departments to stimulate reporting. The State Department of Health now sends monthly morbidity reports by counties and cities above 2,500 population to physicians throughout the state. These reports are inclosed along with blank morbidity cards for reporting by physicians, and are intended to impress physicians with the fact that their reports are appreciated and that the department is desirous of assisting in the bringing of current and perhaps useful information to them with reference to the prevalence of notifiable diseases throughout the state.

The Public Health Service has not rated states for the years 1931 and 1932. Inasmuch as the Census

Bureau statistics of deaths are employed in making ratings, officials of the Public Health Service cannot proceed in rating states until complete records of deaths are received from the Census Bureau. Obviously, this procedure requires time and causes considerable delay in rating states for the Morbidity Reporting Area.

It is hoped that every physician in Georgia will lend his assistance in bringing Georgia into line with other progressive states by reporting notifiable diseases treated by him. The writer is of the opinion that many physicians up to the present have not been adequately informed or impressed as to the importance of reporting. It is doubted whether there is any physician in the state who would desire that his state be held up to question and possibly censure by the physicians of other states that have qualified.

For this reason, if for none other, it is hoped that every physician throughout the state will consider it a patriotic duty and employ his efforts to put Georgia into the Morbidity Reporting Area.

Conclusions

1. Accurate statistical and epidemiological data upon the incidence of disease by cities, counties, the states and nation is available for any period throughout the current and past years, wherever machinery has been set up for proper tabulation.

2. Value of such data has a direct relation to morbidity reporting by physicians.

3. Any appraisal of morbidity conditions in Georgia at present must necessarily take into consideration the "below standard" rating of the United States Public Health Service.

4. It is believed that physicians throughout the state will not approve of a "below standard" rating

for their state, and it is hoped that their personal efforts will within time place Georgia within the "Standard" column.

BIBLIOGRAPHY

1. Williams, R. C. Development of the Proposed Morbidity Reporting Area. Public Health Reports. Vol 46, No. 22, p. 1289. May 29, 1931.

WOMAN'S AUXILIARY *First District Meeting*

(Continued from page 147)

Report of Subscriptions to Hygeia, Mrs. Cleveland Thompson, Millen.

"An Unparliamentary Procedure" (comedy skit), play by the Woman's Auxiliary to the Georgia Medical Society, written and directed by Mrs. Wm. H. Myers and Mrs. J. S. Howkins, both of Savannah.

Report of the Committee on Health, Education and Public Relations, by Mrs. S. T. R. Revell, Louisville, President of the Auxiliary.

Address, Mrs. J. Bonar White, Atlanta, President-Elect.

Address, Dr. A. J. Mooney, Statesboro.

Members of the Auxiliary and doctors were entertained at lunch in the Sea Island Bank Building.

BOOK REVIEWS AND ABSTRACTS.

BOOK REVIEWS

Accidental Injuries, by Henry H. Kessler, A.B., M.D., F.A.C.S., F.A.P.H.A., Lea & Febiger, Philadelphia, 1931. Pages, 718, illustrations, 157. Price \$10.00.

This book deals with the medico-legal aspects of accidental injuries and particularly pertains to workman's compensation and public liability. For one engaged in any form of industrial surgery, this book is invaluable as a reference. The pathology and end results of trauma are detailed. The general principles underlying disability—temporary and permanent—are presented with a legal interpretation and an attempt at standardization. These principles are then specifically applied to the different parts of the body—upper extremity, lower extremity, head, abdominal wall, etc. A consideration of the physiology of both upper and lower extremities precedes the methods of estimating the incapacities of these members. For each specific injury, the average time taken for temporary disability and the average amount of permanent disability resulting is shown. Decisions handed down on court cases are cited frequently. Occupational diseases are discussed. The book ends with an excellent chapter on rehabilitation of the physically handicapped, including reconstruction surgery and re-education as after treatment. This book is based upon an experience of more than 63,000 cases personally examined at the New Jersey Compensation Bureau by the author, an orthopedic surgeon, formerly medical advisor of this bureau and at present Medical Director of the New Jersey Rehabilitation Clinic.

EDGAR BOLING, M.D.

The History of Dermatology. Wm. Allen Pusey, A.M., M.D., LL.D., Professor of Dermatology Emeritus, University of Illinois. Sometime President of the American Dermatological Association and of the American Medical Association. Cloth. Price \$3.00. Pp 223 with 33 illustrations. Chas. C. Thomas, Springfield, Ill., 1933.

To those of us interested in medical history this delightful volume is most welcome. It is far more than its name implies. Doctor Pusey by no means limits himself to dermatological history, but also gives an airplane view of the contemporary history of medicine as well: this, of course, is more or less of a necessity since dermatology is so inextricably bound to general medicine. But the subject is so ably handled that the volume at once becomes of distinct interest to the practitioner of medicine as well as the specialist in dermatology. The author has achieved the Oslerian ability of telling much in a few words, so that its one hundred and seventy-five pages contain a rapidly moving but complete tale of the masters of our art. The historical bibliographic index is especially commendable, an addenda which should be a part of all

historical essays, for the use of those desiring to delve deeper into special points of history. This volume should stimulate similar short histories of the other specialties.

HERBERT S. ALDEN, M.D.

Diseases of the Heart, Described for Practitioners and Students, by Sir Thomas Lewis, C.B.E., F.R.S., M.D., D.Sc., LL.D., F.R.C.P. Price \$3.50, 197 pp., with 45 illustrations. New York: The Macmillan Company, 1933.

The great Mackenzie, it is said was asked during his declining years what he considered his chief claim to fame, and he answered at once, "Thomas Lewis." At times it may have seemed to the shade of that master of clinical medicine that his famous pupil was wandering far from the path of practical medicine into the esoteric fields of research too purely scientific. If such be the case, this book must have delighted the soul of Sir James!

The following excerpt from the preface explains the purpose of the book, a purpose that has been nobly fulfilled:

"The impulse to write a work of reference has not stirred me, but I have had the desire to place at the disposal of students and medical practitioners the outline of my clinical teaching on diseases of the heart, as this has developed in my talks to my own hospital students.

"In beginning that teaching twenty and more years ago I determined that the basis of what I taught should be that which I myself had seen and proved to be true. A second ideal that I have striven hard to attain is simplicity in teaching . . .

"Such a vast amount of knowledge has accumulated about human disease, that we can now cut ruthlessly away from textbooks all that we perceive to rest upon an insecure basis . . .

" . . . Anatomy fails as a chief basis for thought where heart disease is concerned. . . . Therefore, in managing our patients, our thoughts must be chiefly set in terms of function and not of structure. To whom I fail to teach this first simple, but essential lesson I have nought to teach."

Fortunate and rare will be the physician who can not learn a great deal about heart disease from this book, who will not learn that he has believed many things that are not so. But this book was not prepared for such a man; it was designed for the average practitioner who wants guidance that is clear, concise and authoritative. He will find exactly what he is looking for in this book, and he will find it in beautiful English. The illustrations, like the text, are stripped of non-essentials.

This little volume does not lend itself to outlining, every bit is too fine to be content with quo-

tations from the text, but one line is so sound that it must be reproduced. After sketching the futility of treatment in subacute bacterial endocarditis, he says, "The patients should be treated in their homes so far as possible."

The author damns tobacco unqualifiedly for the cardiac patient. One gathers that Sir Thomas does not smoke. The captious might consider a few other details still open to argument.

This book inevitably invites comparison with Paul White's "Heart Disease." It is striking that these two men, who stand in the forefront of the world's cardiologists, unite in emphasizing the patient's history as the most important thing in the diagnosis and prognosis. White goes into considerable detail, and gives the opinion of other authors who may not agree with him fully; he enriches his book with excerpts from famous original papers on the heart and presents a valuable bibliography; he emphasizes the need for further research on the heart; and his book is stimulating. Lewis has not left an unnecessary word in his book: except for the phrase "Adams-Stokes syndrome," he has used almost no proper name and he gives no reference: but, like a well-known cigarette, "It satisfies." If one owns a White he can manage to get along with that alone. If one is content to accept orders, he can treat heart disease well with only a Lewis. The man who is much interested in heart disease must own both.

L.M.B.

MACON

TRANSPORTATION: Nine railroads, ten passenger bus lines; air passenger service and air mail.

THEATERS: Four movies.

GOLF: Country Club has 18 hole course; public 18 hole and 9 hole courses.

SHOOTING: Gun Club.

PARKS AND PLAYGROUNDS: Include 500 acres.

CIVIC CLUBS: Rotary, Kiwanis, Civitan, Lions, Exchange, Business and Professional Women.

NEWSPAPERS: *Macon News* and *Macon Telegraph*.

CHURCHES: All southern denominations are represented.

HIGHWAYS: Macon is the converging point for paved highways—north, east, south, and west.

IMPORTANCE: Macon is situated in the southeast and is the trading center for approximately one million people.

POINTS OF INTEREST IN MACON

Municipal auditorium—largest copper-covered dome in the world.

City Hall—location of city offices.

First Baptist Church.

Home of Sidney Lanier—the South's world-famous poet.

Lanier High School for girls.

St. Paul's Episcopal Church.

Tattnall Square Park and Playgrounds.

Mercer University—a Baptist Institution for men.

Lanier High School for Boys—erected in 1924.

Lanier

High

School

Macon

Bibb

County

Grammar

School

Macon



*Cherry Street
(upper)*

*Poplar Street
(lower)*

Vineville Baptist Church (turn left here if you desire to visit the Idle Hour Club, the Idle Hour Nurseries, and Greater Wesleyan College, oldest chartered college in the world for women; Chartered 1836.)

Wesleyan College—These buildings now used as Wesleyan Conservatory.

Washington Memorial Library.

Mulberry Street Methodist Church—largest in South Georgia Conference.

Bibb County Court House—rebuilt in 1924.

U. S. Post Office—location of government offices.

LOCATIONS

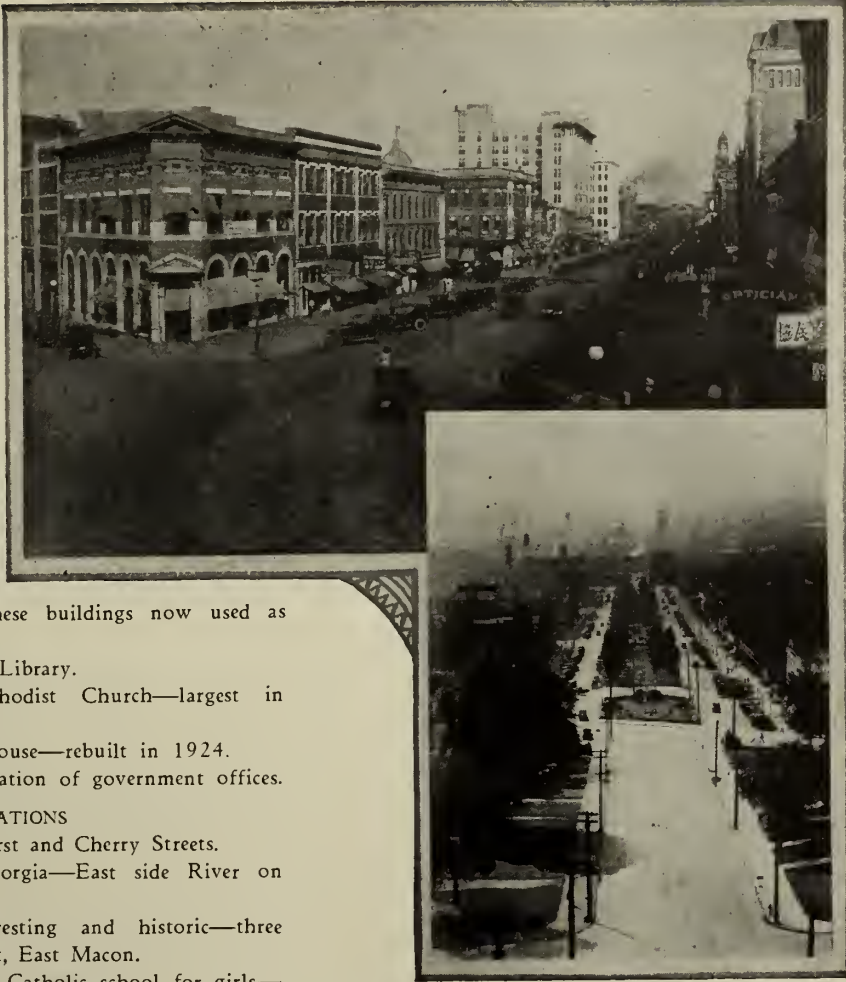
Y. M. C. A., corner First and Cherry Streets.

Masonic Home of Georgia—East side River on Masonic Home Road.

Indian Mounds, interesting and historic—three blocks east of Main Street, East Macon.

Mt. de Sales Academy, Catholic school for girls—corner Orange and Columbus Streets.

Bird's Eye View of Macon—Bond Street at Coleman Hill.



*Fort Benjamin Hawkins, Macon
"The Beginning of Macon"*

Fort Hawkins Site where Macon began in 1819—top of Fort Hill Street in East Macon.

Idle Hour Club Golf Course—Northwest on Forsyth Road, two miles beyond city limits.

Public Golf Courses—18-hole, Columbus Road; 9-hole, Jeffersonville Road.

A. L. Miller High School (Girls) Montpelier Avenue.

Macon is located within six miles of the geographical center of the state. It has a population of 64,045. Incorporated in 1823.

It has three important paved highways running through the city, Dixie, National and Transcontinental.

There are eight hotels with a total of 1,150 rooms.

Fifty miles of paved streets within the city limits offer an excellent opportunity to all motorists to visit different sections of the city.

Thirty-five passenger trains and twenty-eight buses daily furnish adequate transportation facilities with air mail and passenger planes.

Its industries consist of textile, lumber, brick, sewer pipe, kaolin, fertilizer and cotton seed oil manufacturers with railroad repair shops.

AUTOMOBILE INSURANCE*
MEDICAL SOCIETY OF THE STATE OF
NORTH CAROLINA

Office of the Secretary-Treasurer

Southern Pines, N. C.,
January 15, 1932.

To the Fellows of the Medical Society of the
State of North Carolina:

At a meeting of the Executive Committee at Greensboro, Saturday, January 9th, several different forms of insurance were studied with a view to saving the Fellows of the Society money on premiums paid. Among others was automobile insurance and the Executive Committee by motion approved the State Farm Mutual Automobile Insurance Company for automobile insurance for our members. Immediately after the meeting the President and Secretary took out a policy in this company.

We have investigated this company and it seems to be perfectly sound from every standpoint.

We are enclosing you herewith, two leaflets which will give you some information in regard to it if you care to follow it up further. We are also enclosing you a postcard addressed to Mr. M. M. Stewart, special agent for North Carolina, Raleigh, N. C., that does not require postage. On the opposite side you will find certain facts which you can easily fill in that will enable the company to give you the price of whatever kind of insurance you want on your car and an agent of the company will call on you.

According to figures submitted, you will find this company will save you from 40 to 50 per cent of the premium you have been having to pay.

You will remember that an endeavor was made to get the law in regard to group insurance so changed that our Society would be able to secure group insurance of all the various kinds. On account of the opposition of the State Insurance Commissioner and Insurance men who were in the legislature and on the outside of the legislature we were unable to do so. This is our answer to that action.

Only doctors in good standing are eligible to this insurance. Present your 1932 membership card when the agent calls.

You may rest assured that the Executive Committee takes great pleasure in passing on to you the large saving arranged through this company.

Very truly yours,
L. R. MCBRAYER, M.D.
Secretary-Treasurer.

*The Medical Association of Georgia can supply its members with the same form of protecting policies as those sold to the members of the Medical Society of the State of North Carolina. If interested in any form of automobile insurance, write the office of the Association. When the policy you now have expires or comes up for renewal; it will be to your interest to have a policy written through the office of the Association, 139 Forrest Avenue, N.E., Atlanta.

NEWS ITEMS

The Georgia Medical Society held its regular meeting on March 28th. Dr. Chas. Usher, Savannah, read a paper entitled "Intestinal Obstruction." The discussion was led by Dr. L. W. Williams and Dr. Jno. W. Daniel, both of Savannah. Dr. M. J. Epting, Savannah, gave a case report entitled "Intestinal Obstruction from Gallstones." The society adopted the following resolution and wired copies to Senators Walter F. George and Richard B. Russell, Jr., Washington, D. C.: "The Georgia Medical Society in regular meeting tonight unanimously adopted a resolution approving the President's economy bill. You are urged to use all your influence to push this measure through without amendment."

Dr. C. C. Fishburne, formerly of Brunswick, has moved to Darien and will continue the practice of medicine at the latter location.

The Spalding County Medical Society met at the Strickland and Son Memorial Hospital, Griffin, on March 21st.

Dr. W. R. Garner, Gainesville, addressed the Literary Club at its meeting on March 16th, on "Medicines of Yesterday and Today."

The Tri Medical Society, composed of the counties of Calhoun, Early and Miller, met at Edison on March 8th. Its next meeting will be held at Arlington in June.

Dr. and Mrs. O. N. Harden, Cornelia, entertained the members of the Habersham County Medical Society at their home on March 15th.

Dr. Chas. H. Richardson, Macon, President-Elect of the Association, read a paper before the Macon Medical Society on March 21st, entitled "Agranulocytosis—Report of an Unusual Case."

The Randolph County Medical Society met at Cuthbert on April 6th. Dr. F. M. Martin, Shellman, read a paper entitled "Common Diseases of the Eye." Other members gave case reports.

The American Heart Association will hold its scientific session in the Knickerbocker Hotel, Milwaukee, Wis., June 13th, 9:30 A. M. to 5:30 P. M.

The Thomas County Medical Society met at the John D. Archbold Memorial Hospital, Thomasville, on March 15th. The scientific program consisted of titles for papers as follows: "Empyema—Surgical Aspect," Dr. Arthur D. Little, Thomasville; "Empyema—Medical Treatment," Dr. W. W. Jarrell, Thomasville; "Empyema—X-Ray Findings," Dr. J. J. Collins, Thomasville. Officers were elected for the ensuing year. The members present were entertained at dinner by the management of the hospital.

Dr. Allen H. Bunce, Atlanta, Secretary-Treasurer of the Association, spoke at Athens in a Crawford W. Long Day address on "The Practice of Medicine as a Career." The following is a part of the report published in the *Atlanta Constitution* on March 31st: "The general practitioner still has 'a much wider field of usefulness in his community' than any other medical man and the present trend of the profession is toward general practice rather than specialization. Five possible careers are open to the youth who chooses the profession of medicine. He named them as research, teaching, public health, army and navy and veteran's work, industrial medicine and private practice. Each of these fields offers attractions to certain types of individuals and has certain advantages of its own, but 'the art of medicine reaches its highest development' in the handling of private practice. Even in research 'most of the important discoveries in medicine have been made by those on the firing line, i. e., those engaged in private practice. Pasteur made the Pasteur Institute which was built for him in Paris by the French people. The institute did not make Pasteur great.' Eighty-five per cent of sick people can receive all the benefits of present medical knowledge from any well-trained, modern physician wherever he may be located—only 15 per cent suffering from diseases which may be diagnosed with difficulty and require special types of treatment, must be referred to physicians especially trained for limited practice."

The Eleventh District Medical Society met at the Y. M. C. A. Auditorium, Waycross, on April 11th. The following titles for papers were on the scientific program: "The Relation of Medical Education and Legislation to Medical Care," Dr. E. H. Egbert, St. Simons' Island; "The Prevalence of Trachoma in Georgia," Dr. J. Victor Roule, Albany; "Some Facts on Head Injuries," Dr. B. G. Owens, Valdosta; "High Carbohydrate Diets in the Treatment of Diabetes in Children," Dr. A. M. Johnson, Valdosta; "Potential Epilepsy," Dr. G. W. H. Holmes, Brunswick; "Amebiasis—Report of Cases," Dr. H. M. Tolleson, Habira; and "Artificial Pneumothorax—Illustrated with Slides," Dr. J. A. Redfearn, Albany. Dinner was served at the Okefenoke Golf Club.

Dr. C. C. Aven, Atlanta, read a paper before a meeting of the Georgia Baptist Hospital Staff on March 21st, entitled "Biliary Obstruction."

The Atlanta Tuberculosis Association, 286 Forrest Avenue, N.E., Atlanta, has sent out a little leaflet entitled "From Whom? To Whom?" It is a pertinent little article in reference to tuberculosis and will be found relevant by all its readers.

The State Board of Examiners of Nurses will hold examinations for the registration of graduate nurses in Atlanta, Augusta, Macon and Savannah on April

27-28. Miss Jane Van De Vrede, 131 Forest Avenue, N.E., Atlanta, is Educational Supervisor.

Dr. Newdigate M. Owensby, Atlanta, warmly commends an editorial which appeared in the *LaGrange Daily News* in which it deplored the overcrowded conditions in the Milledgeville State Hospital after an inmate of the Troup county jail had committed suicide after being adjudged insane. Dr. Owensby wrote as follows: "I have just noted in the columns of the *Atlanta Constitution*, your recent editorial entitled 'Murder by the State.' It is somewhat of a paradox that we have so many preachers presiding over so many churches which are filled each Sunday with large congregations of people who claim to be Christians and who contribute to heathens that have never treated their mentally ill fellow men and women in such a barbarous manner as we do. Perhaps they are damned beyond any hope of redemption, or perhaps the Georgia brand of Christianity is just plain hookum, *quien sabe?* The picture you drew of the treatment accorded by the State of Georgia to its mentally ill citizens is not a pleasant one, but it was wonderfully accurate. Since this particular class of people are unable to speak for themselves, sincerely trust you will continue your humanitarian efforts to champion their cause."

Hotel Dempsey, Macon, will be headquarters for the Eighty-Fourth Annual Session of the Medical Association of Georgia to be held on May 9, 10, 11, 12, 1933. All meetings and exhibits will be on the mezzanine floor.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on April 6th. Dr. John D. Blackburn, Atlanta, gave a clinical talk on "Well-leg Traction in Fractures of the Hip Region," and presented a patient in traction; Dr. J. H. Kite, Decatur, read a paper entitled "Non-Operative Versus Operative Treatment of Tuberculosis of the Spine in Children. A Review of 50 Cases Treated by Each Method—Lantern Slides." The discussion was led by Dr. Lawson Thornton, Dr. Fred G. Hodgson and Dr. C. C. Aven, all of Atlanta.

The Macon Medical Society met on April 4th. Dr. Champneys H. Holmes, Atlanta, read a paper entitled "Some Practical Points in the Diagnosis of Pulmonary Diseases."

The University of Nebraska College of Medicine, Omaha, Nebraska, offers its usual postgraduate course, May 15th to 20th, inclusive. The course, this year will be offered under the auspices of the Department of Medicine, Neuro-Psychiatry and Dermatology.

The Georgia Medical Society held its regular meeting on April 11th. Dr. H. H. McGhee, Savannah, read a paper entitled "Pulsion Diverticula of the Esophagus"; discussion was led by Dr. Robert Drane

and Dr. E. N. Maner, both of Savannah. Dr. L. W. Shaw, Savannah, gave a case report entitled "Balinitis Gangraenosa."

The Georgia Urological Association will hold its annual meeting for the election of officers at Macon during the annual session of the Medical Association of Georgia, May 10, 11, 12.

The Georgia Hospital Association held its third quarterly meeting at the Henrietta Egleston Hospital for Children, Atlanta, on March 30th. Dr. Russell H. Oppenheimer, Emory University, attended the meeting as Chairman of the Committee on Hospitals of the Medical Association of Georgia. Motion unanimously carried to invite Dr. Allen H. Bunce, Atlanta, to join the Georgia Hospital Association. The committee previously appointed to study the subject of "A Central School of Nursing" was authorized to continue its investigation and report at a later date.

The Medical and Surgical Staff of the Crawford W. Long Memorial Hospital met on April 13th. Dr. John B. Fitts, Atlanta, discussed "Indigestion from a Medical Standpoint"; Dr. Shelley C. Davis, Atlanta, discussed "Indigestion from a Surgical Standpoint." Other members of the Staff discussed "Mortalities." Dinner was served in the dining room of the institution.

The Jackson-Barrow Counties Medical Society met at the Granite Hotel, Winder, on April 3rd. Dr. L. C. Allen, Hoschton, spoke on the recent session of the General Assembly of Georgia and the reorganization of the State Board of Health. The members of the society gave him a vote of thanks. The next meeting will be held at Commerce, May 1st.

Dr. Chas. C. Hinton, Macon, spoke on "The Value of Periodic Health Examinations" at a meeting of the Woman's Auxiliary to the Macon Medical Society on March 30th.

The second Pre-School Health Conference was held at Albany on April 11th. Dr. N. R. Thomas, Albany, spoke on "The Normal Growth and Development of the Child"; Dr. F. K. Neill, Albany, talked on "Environment and Its Relation to Conduct."

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on April 20th. Dr. L. Minor Blackford, Atlanta, reported a case "Congenital Heart Block—Demonstrated by Presence of Patient"; Dr. Earl Floyd and Dr. J. L. Pittman, Atlanta, gave clinical talks on "The Injection of Hydroceles with the Newer Sclerosing Solutions"; Dr. John W. Turner, Atlanta, read a paper entitled "Acute Intestinal Obstruction". The discussions were led by Dr. W. A. Selman, Dr. P. L. Hudson, and Dr. Avary M. Dimmock, all of Atlanta.

OBITUARY

Dr. Otis B. Salley, Augusta: University of Georgia Medical Department, Augusta, 1879; aged 77; died at his home on March 3, 1933. He was reared in Orangeburg, S. C. Doctor Salley moved to Augusta where he resided for fifty-seven years. He had a reputation for being a quiet, unassuming Christian gentleman, and devoted to his family. Hundreds of friends in Augusta and surrounding territory held him in high esteem. Surviving him are three sons, M. G. Salley, Augusta; Otis B. Salley, Philadelphia, and Frank W. Salley, Atlanta. Rev. E. C. Sheridan conducted the funeral services from the Curtis Baptist church. Interment was in Westover cemetery.

Dr. James T. Gammage, Pineview; member: Southern Medical College, Atlanta, 1891; aged 62; died in a local hospital at Macon after an illness of short duration on March 9, 1933. He served as Commissioner of Wilcox County for a number of years. Dr. Gammage was described by his friends as being a "great and good man." A number of times he gave free clinics for the school children. Dr. Gammage was a member of the Wilcox County Medical Society and the Friendship Baptist church and had served as Deacon for more than twenty years. Surviving him are his widow, two daughters: Mrs. M. M. Clements and Miss Lelia Gammage; two sons, J. D. and M. H. Gammage. Funeral services were conducted from the Friendship Baptist church by Rev. M. F. Reeves of Warwick. Burial was in the church cemetery. Members of the Wilcox County Medical Society and doctors from adjoining counties formed an honorary escort.

Dr. John Colbert McAfee, Macon; member: Baltimore Medical College, Baltimore, Md., 1898; aged 59; died at his home of heart disease on March 27, 1933. He was born and reared in Crawford county. Doctor McAfee was an ardent worker in civic and religious activities, and a worthy leader in such movements. He was a successful business man and built an excellent reputation as a general practitioner. He was at one time president of the Idle Hour Country Club and the Macon Medical Society. Doctor McAfee graduated from Mercer University with the degree of Bachelor of Arts. He had taken postgraduate work in Baltimore and New York City. For a number of years he was engaged in farming and fruit growing in Bibb and Crawford counties. He was a member of the Macon Medical Society, American Medical Association and the First Baptist church. Surviving him are his widow, three sons, Edwin D., William A. and John C., Jr.; and one brother, Dr. L. C. McAfee, Macon.

Dr. John Martin Glover, Stapleton; University of Georgia Medical Department, Augusta, 1887; aged 73; died at his home on March 11, 1933. He had practiced medicine for more than forty years and was loved by hundreds of friends throughout an ex-

tensive territory. Doctor Glover was a member of the Methodist church. Surviving him are his widow, one son, F. C. Glover, Macon; three daughters, Miss Nellie Glover, Stapleton; Mrs. Willie Kitchens, Stapleton, and Mrs. Kate Rabun, Orlando, Fla. Funeral services were conducted from the Methodist church and interment in Underwood cemetery at Gibson.

Dr. Young Allen Little, Milledgeville: Southern Medical College, Atlanta, 1905; aged 54; died at his home after an illness of short duration on March 15, 1933. He was born and reared in Hancock county. Doctor Little graduated from Gordon Institute. He served as Captain in the medical corps during the World war. He was past president of the Kiwanis Club and a member of the Catholic church. Doctor Little had many warm, personal friends. Surviving him are his widow, one brother, Frank Little, Washington, D. C.; one sister, Mrs. Bob McAvoy, Macon. Funeral services were conducted from the Sacred Heart Catholic church by Father T. J. McNamara.

Dr. Francis B. Ricketson, Warrenton: member: University of Georgia Medical Department, Augusta, 1887; aged 73; died of heart disease at his home on March 26, 1933. He was influential in politics and served as representative of Warren county in the lower house of the General Assembly of Georgia, also one term as State Senator. Doctor Ricketson was a leader for many years in the practice of medicine in Warren and adjoining counties. At the time of his death he was a member of the Warren County Medical Society, the American Medical Association and the Warrenton Baptist Church. Before moving his membership to the Warrenton Baptist church, he was a member of the Little Brier Creek Baptist church for about forty years. Doctor Ricketson was always noble and generous in his dealings with people. Surviving him are one daughter, Mrs. Joe Gheesling, Warrenton; five sons, W. F. Rickertson, Norwood; E. D., John F., D. S., and G. Dewey Ricketson, all of Warrenton. Funeral services were conducted from the residence by Rev. Willis J. Howard of Wrens. Burial was in the city cemetery of Warrenton. The members of the Warren County Medical Society and the Washington County Medical Society were honorary pallbearers.

Dr. Wilborn Arthur Upchurch, Atlanta; member: Atlanta College of Physicians and Surgeons, Atlanta, 1903; aged 50; died of pistol shot wounds by would-be-robbers on March 27, 1933. He had stopped his car in front of a friend's home on his way from a Sunday School sociable when attacked. Doctor Upchurch was born and reared in Gwinnett county. At the time of his death he was on the medical staffs of the Grady Hospital, Georgia Baptist Hospital, and Crawford W. Long Memorial Hospital. He had attained an enviable reputation in his profession and for many years had limited his practice to urology. Doctor Upchurch was a member of the Fulton Coun-

ty Medical Society, Atlanta Urological Society, American Medical Association, F. & A. Masons, Shrine, and the Central Presbyterian church. Surviving him are his widow, and one daughter, Miss Francis Upchurch. Funeral services were conducted from the Central Presbyterian church by Dr. S. R. Oglesby. Pallbearers were Dr. S. T. Brown, Dr. O. B. Bush, Dr. H. G. Estes, Dr. W. E. Barber, Dr. W. P. Nicolson, Dr. Geo. W. Fuller, Dr. L. G. Baggett and Dr. H. J. Rosenberg. Other members of the Fulton County Medical Society with members of the Shrine and officers of the Central Presbyterian church formed an honorary escort. Interment was in West View cemetery.

Dr. William F. Gann, Columbus: Louisville Medical College, Louisville, Ky., 1888; aged 82; died at his home on March 24, 1933. He had practiced medicine in Columbus longer than any other physician and was prominent in professional and religious circles. Surviving him are one daughter, Miss Lula Gann, Columbus; two brothers, Thos J. and Robert Gann, Atlanta; and one sister, Mary Alice Gann, Columbus. Burial was in Columbus city cemetery.

Dr. Elijah S. Peacock, Harrison: member: University of Georgia Medical Department, Augusta, 1888; aged 72; died after an illness of short duration at his home on April 15, 1933. He was born and reared in Washington county and was one of its outstanding citizens and physicians. Doctor Peacock had practiced medicine for more than forty years with excellent success. His friends were numerous throughout that section. He was actively identified with all civic, medical and religious undertakings in the community. Doctor Peacock was a member of the Washington County Medical Society, American Medical Association, Harrison Lodge of F. & A. M., member of the Washington County Board of Health, and the Baptist church. Surviving him are his widow; one son, Clay E. Peacock, Atlanta; and one daughter, Mrs. Erma Peacock Barron, Midville. Rev. R. D. Hodges, Tennille, conducted the funeral services from the Mount Moriah church, near Tennille, and interment will be in Zeta cemetery at Tennille. The members of the Washington County Medical Society acted as an honorary escort.

Dr. William N. Edenfield, Vienna: member: University of Georgia Medical Department, Augusta, 1892; aged 69; died at his residence on April 17, 1933. He was born and reared in Screven county, South Carolina, and later attained a collegiate education at Mercer University. Doctor Edenfield practiced medicine in Atlanta for about thirty years, then removed to Vienna and practiced there until his death. The Druid Hills Baptist church was organized at his home on Ponce de Leon Avenue, Atlanta, in 1914. He was a member of the Board of Deacons and the first chairman of the Board. Doctor Edenfield was a prominent physician and churchman and held in high esteem by hundreds of friends. Surviving him

are one daughter, Miss Laura Edenfield, Vienna; two sisters, Mrs. Essie Cleland, Miami Florida, and Mrs. Maude Barr, Sylvania; one brother, Mercer Edenfield, Lakeland Florida. Funeral services were conducted from the Baptist church by Dr. Louie D. Newton, Atlanta, and Rev. J. M. Teresi, Vienna. Burial was in the Vienna cemetery.

THE COUNTRY DOCTOR

(Continued from page 129)

ferent states. Some of my earliest memories are of a family physician in West Virginia. My younger brother had what the doctors in that section called "lung fever." When the doctor came, I was very much interested in the examination of the patient and the preparation of the medicines and I remember thinking that the direct auscultation was just the doctor's way of loving my small brother. I was supremely interested in the doctor's horse, saddle and saddle bags, his high boots with red tops, his flat-top derby hat, and his split-tailed frock coat which flapped up and down on each side of the saddle when the horse galloped away. That must have been about the year 1884 and at that time most of the men in the hills of West Virginia wore full beards, so the doctor's Van Dyke would not have attracted my youthful attention had it not been almost snow white. I remember being informed in this connection, that while working in the dissecting room when in medical school the doctor had accidentally inflicted upon himself an incised wound and thinking that this meant almost certain and immediate death, his mental anguish was such that his hair turned white in twenty-four hours time.

I also remember living in a community in northern Ohio, in about the year 1888, where all the churches had doctors as choir leaders; the idea being, I suppose, that the physician, knowing how to take care of himself physically should be a very robust, strong lunged individual and would therefore be a good vocalist. However, I do not think that this idea always worked out in an agreeable manner, for some of the pompous bellowings that these musical medicos turned loose were anything but melodious.

Most of these country physicians of forty and fifty years ago were men of high standing in their communities. They usually did the best they could for suffering humanity and what they lacked in education and training they often made up in resourcefulness, initiative and a common sense application of the resources at their command.

For the past twenty-five years, especially in the northeastern and north-central parts of the United States, the country doctor has

been gradually disappearing. As has often been said, this is a day of specialization in medicine and surgery. In the more densely populated rural sections the men who used to do general practice are forming groups and each individual of the group practices some specialty. This is probably as it should be, for as we all know the whole field of medicine is too large for any one man to master. However, in the sparsely settled sections of the south and west, we still have the country doctor and probably will have him for many years to come. These sections are often far removed from medical centers and clinics and a large percentage of the inhabitants are too poor to pay a hospital bill or a specialist's fee unless such action becomes imperative, so in these sections one of the chief factors that contribute to the usefulness and success of the general practitioner is his ability to judge whether or not his patient really needs special treatment.

In some of these "far back" sections when Bill Corntassel has a toothache, instead of going to a dentist, he gets his family doctor to pull the tooth and when Bill's wife is going to have a baby, instead of sending her to a hospital or employing a trained obstetrician, he gets Doc to pull the baby too. Bill may or he may not have money to pay Doc but during his wife's lying-in period he often has money enough to buy a quart or two of mean liquor and to visit some daughter of joy and perhaps joyfully acquire a specific urethritis. When this happens, instead of going forthwith to a specialist, Bill shamefully waits a few days and lets the disease become well established and then goes to Doc and says that a friend of his has the "clap" and wants some medicine. He is given some "blue pills" to take and some permanganate of potash solution to squirt into his urethra and if some time later Bill comes down with arthritis or perhaps an endocarditis, he wonders why Doc can not cure these conditions as easily as he took care of the tooth and the baby.

Long and irregular hours, bad roads, and lack of proper equipment often combine to make the life of the country doctor a hard one. Many of the people among whom he has to work are exacting and unsympathetic. The country doctor should be a real philosopher and should most certainly and usually does possess a sense of humor. If unfortunately he is not possessed of these qualities, the disease, squalor, laziness and filth, the ignorance, poverty and superstition with which he must come in contact are likely to give him a pessimistic view of life, and cause him to take the attitude that any effort directed

toward improvement of the human race, either physically, mentally or morally, is just a waste of time and that the only real reason he should practice medicine is to make a living for himself and his dependents. Of course this is a wrong attitude and I do not believe there are many who take it.

If one must be a country doctor, one should therefore try to develop a philosophic attitude toward life, for the doctor's opportunities for real service to humanity, both within and without the field of medicine, are almost unlimited. When he is brought face to face with the skeleton in some family closet or when some seared and troubled soul is laid bare before him, he should forget his diagnosis and treatment of physical ills long enough to dispense a few words of comfort, wisdom and good cheer.

Statistics show that the days of the average country doctor are not many or long in the land that lies on this side of the river Styx. He is usually gathered unto his fathers before the number of his years has reached three-score. He very often dies with his boots on and I think that is as he wants it and that he really prefers to go that way. He has so often been in the presence of death that he has lost all fear of that grim reaper, and I believe he usually takes the same attitude toward death as that taken by Robert Louis Stevenson, when he wrote—

Under the wide and starry sky
Dig the grave and let me lie;
Glad did I live and gladly die,
And I laid me down with a will.

This be the verse you grave for me:
Here he lies where he longed to be;
Home is the sailor, home from sea,
And the hunter home from the hill.

COUNTIES REPORTING FOR 1933

Laurens County Medical Society

The Laurens County Medical Society announces the following officers for 1933:

President—Thompson, Wm. C., Dublin.
Vice-President—Barton, J.J., Dublin.
Secretary-Treasurer—Hicks, Chas. L., Dublin.
Delegate—Coleman, A. T., Dublin.
Alternate Delegate—Claxton, E. B., Dublin.

Glynn County Medical Society

The Glynn County Medical Society announces the following officers for 1933:

President—Cheney, G. W. H., Brunswick.
Vice-President—Simmons, J. W., Brunswick.
Secretary-Treasurer—Willis, T. V., Brunswick.
Delegate—Greer, C. B., Brunswick.
Censors—Pierce, L. W., Avera, J. B., and Burford, R. S.

Elbert County Medical Society

The Elbert County Medical Society announces the following officers for 1933:

President—Bailey, D. V., Elberton.
Vice-President—Johnson, W. A., Elberton.
Secretary-Treasurer—Johnson, A. S., Elberton.
Delegate—Thompson, D. N., Elberton.
Alternate Delegate—Bailey, D. V., Elberton.
Censors: Smith A. C., Johnson, J. E., and Thompson, D. N.

Cherokee County Medical Society

The Cherokee County Medical Society announces the following officers for 1933:

President—Moore, R. M., Waleska.
Vice-President—Coker, N. J., Canton.
Secretary-Treasurer—Brooke, Geo. C., Canton.
Delegate—Coker, G. N., Canton.
Alternate Delegate—Garrison, D. H., Tate.
Censors: Coker, G. N., Boring, J. R., and Garrison, D. H.

Ocmulgee Medical Society

(Dodge, Bleckley and Pulaski)

The Ocmulgee Medical Society announces the following officers for 1933:

President—Bush, A. R., Hawkinsville.
Secretary-Treasurer—Parkerson, I. J., Eastman.
Delegate—Coleman, W. A., Eastman.
Alternate Delegate—Massey, W. F., Chester.

Ware County Medical Society

The Ware County Medical Society announces the following officers for 1933:

President—Witmer, C. A., Waycross.
Vice-President—DeLoach, A. W., Waycross.
Secretary-Treasurer—McCullough, K., Waycross.
Delegate—Stephens, C. M., Waycross.
Alternate Delegate—Hafford, W. C., Waycross.

Dr. F. J. Cullen, Federal Food and Drug Administration, warns against coated laxatives. He says: "Many different kinds of sugar coated or chocolate-coated laxatives, put up in such a way as to resemble candy or chewing gum, are on the market today and careless use of them is injurious to children or adults. These laxatives come in various forms, such as pressed fruits, mints, small cubes, or lozenges, sometimes brightly colored, and are packed attractively. Practically all of them contain phenolphthalein, a drug known to injure the tissue of the liver."

The April 3rd issue of Health News—N. Y. State Department of Health states that: "Adverse economic conditions have affected to a considerable extent the work of public clinics for the care of syphilis cases. Patients admitted for the first time to these clinics in 1932 exceeded those in 1929 by 56 per cent."

MAIN TOUR IN CONNECTION WITH
AMERICAN MEDICAL ASSOCIATION CON-
VENTION IN MILWAUKEE, JUNE 12-16, 1933

Wednesday, June 7th—Leave Atlanta, Ga., at 6:20 P. M. via N. C. & St. L., "Dixie Limited". Pullman accommodations according to personal requirements.

Thursday, June 8th—Arrive Chicago, Ill., at 2:00 P. M. Transfer from station to Hotel Sherman. Double room with bath, basis two in room included. Dinner included at hotel.

Friday, June 9th—Sightseeing Tour of Chicago's South Side via Gray Line, terminating at the Exposition. General admission ticket included to Century of Progress Exposition. Luncheon and Dinner at Exposition. Motor Coach sightseeing tour of Exposition via Gray Line with guide-lecturer. Transfer from Exposition back to Hotel Sherman via Motor Coach.

Saturday, June 10th—Breakfast, luncheon and dinner at Hotel Sherman. Sightseeing tour of Chicago's North Side via Gray Line. Motor coach transfer from hotel to Exposition and return. General admission ticket to Exposition. Transfer back to hotel via motor coach.

Sunday, June 11th—Leave Chicago at 12:01 A. M. via C. & N. W. railroad, pullman coach seat included. Arrive Milwaukee at 1:55. Transfer from station to Hotel Schroeder. Double room with bath, basis two in room included. (No meals included while in Milwaukee).

Monday, June 12th to Thursday, June 15th, in Milwaukee attending convention.

Friday, June 16th—Leave Milwaukee at 12:40 P. M. noon via C. & N. W. railroad. Pullman seat included. Arrive St. Paul at 9:00 P. M. Leave St. Paul at 9:50 P. M. via Soo Line. Pullman accommodations according to personal requirements.

Saturday, June 17th—Enroute through Canadian Rockies.

Sunday, June 18th—Arrive Banff at 11:26 A. M. Hotel Mt. Royal. Outside double with bath, basis two in room included. Afternoon sightseeing tour of Banff and vicinity via motor coach.

Monday, June 19th—Leave Banff about 9:00 A. M. after breakfast, via motor coach for delightful scenic trip via Johnson Canyon to Lake Louise, arriving around noon. Deer Lodge with outside double with bath, basis two in room included.

Tuesday, June 20th—At Lake Louise. Morning sightseeing tour to Moraine Lake and Valley of Ten Peaks. Leave Lake Louise at 12:31 P. M. noon via Canadian Pacific Railway pullman accommodations according to personal requirements.

Wednesday, June 21st—Arrive Vancouver at 9:00 A. M. Transfer from station to Hotel Vancouver. Outside double room with bath, basis two in room included. Afternoon sightseeing tour of city included.

Thursday, June 22nd—Sail from Vancouver at 10:30 A. M. via Canadian Pacific Steamer. Arrive Vic-

toria at 3:30 P. M. Party will be met at pier by motor coach and taken for sightseeing tour of City of Victoria. Sail from Victoria at 4:30 P. M. Arrive Seattle, Wash., at 9:30 P. M. Transfer to Hotel Olympic. Double with bath, basis two in room included.

Friday, June 23rd—In Seattle. Sightseeing tour of Seattle included.

Saturday, June 24th—Leave Seattle at 8:00 A. M. via stage and arrive Paradise Inn, Paradise Valley, Mt. Ranier National Park. Luncheon at Paradise Inn. Foot trips may be made to Nisqually, and Paradise Glaciers if one so desires. Dinner at Paradise Inn. Room with bath included.

Sunday, June 25th—Leave Paradise Inn at 8:00 A. M. after breakfast. Arrive Tacoma at 11:15 A. M. Leave Tacoma at 2:10 P. M. via Union Pacific Lines. Pullman included. Arrive Portland at 6:15 P. M. Transfer to the Hotel Multnomah. Double room with bath, basis two in a room included.

Monday, June 26th—In Portland. Sightseeing tour over the famous Columbia River highway included. Leave Portland at 9:50 P. M. via Southern Pacific "Cascade Limited". Pullman accommodations according to personal requirements.

Tuesday, June 27th—Enroute via Klamath Falls and arrive San Francisco at 6:50 P. M. Transfer to Hotel Palace. Outside double with bath, basis two in room included.

Wednesday, June 28th—In San Francisco. Morning free. Afternoon sightseeing tour of city to Golden Gate Park included.

Thursday, June 29th—Leave San Francisco at 8:00 A. M. via Southern Pacific Lines. Pullman accommodations according to personal requirements, en route down the scenic California Coast. Arrive Los Angeles at 8:45 P. M. and transfer to Hotel Hayward. Double with bath, basis two in room included.

Friday, June 30th—In Los Angeles. Sightseeing tour of Hollywood and beaches.

Saturday, July 1st—In Los Angeles. Time at passengers disposal. Leave Los Angeles at 10:00 P. M. via Union Pacific "Pacific Limited". Pullman accommodations according to personal requirements.

Sunday, July 2nd—En route via Zion National Park, Northern Rim of Grand Canyon, and arrive Salt Lake City at 9:30 P. M. Transfer to Hotel Newhouse. Outside with bath, basis two in room included.

Monday, July 3rd—In Salt Lake City. Sightseeing tour of city and Saltair Beach included. Leave Salt Lake City 9:00 P. M. via D. & R. G. Railroad. Pullman accommodations according to personal requirements. This is one of the most scenic routes via rail in America.

Tuesday, July 4th—Pass through the world famous Royal Gorge of the Colorado, allowing 10-minute stops in the Gorge. Arrive Colorado Springs at 6:10 P. M. and transfer to Hotel Antlers. Double with bath, basis two in room included.

Wednesday, July 5th—In Colorado Springs. Sightseeing tour to Garden of the Gods, Cave of the Winds and Seven Falls. (Those who prefer may make trip to summit of Pike's Peak instead).

Thursday, July 6th—Leave Colorado Springs at 12:05 P. M. noon via D. & R. G. Railroad. Pullman included. Arrive Denver at 2:10 P. M. Transfer to Hotel Auditorium. Outside double with bath, basis two in room included.

Friday, July 7th—In Denver. Sightseeing tour of Denver and Mountain Parks included. Leave Denver at 9:15 P. M. Rock Island Lines. Pullman accommodations according to personal requirements.

Saturday, July 8th—Arrive Kansas City at 4:45 P. M. Leave Kansas City at 7:15 P. M. via Frisco Lines. Pullman accommodations according to personal requirements.

Sunday, July 9th—En route via Memphis. Arrive Birmingham, Ala., at 3:55 P. M.—Arrive Atlanta, Ga., at 9:05 P. M.

TOUR PRICES—Atlanta to Atlanta—Per Person

\$460.39—1 person to an upper.

\$478.03—1 person to a lower.

\$506.14—2 persons to a compartment.

\$533.89—2 persons to a drawing room.

\$489.39—3 persons to a drawing room.

\$ 69.80—Optional side-trip from Salt Lake City to Yellowstone and return for those who desire this trip. All meals included.

CONDITIONS

The inclusive rates quoted above for this itinerary cover arrangements commencing with departure from Atlanta, June 7, 1933, and terminating with arrival back in Atlanta on July 9, 1933, and provide the following services:

1.—Round-trip rail transportation from Atlanta back to Atlanta as per the itinerary.

2.—Pullman according to the requirements of each individual.

3.—Experienced conductor to escort the party and handle all details.

4.—All meals included for the entire trip, with exception of stay in Milwaukee.

5.—Transfers from railroad stations to hotels and vice-versa.

6.—First class hotel accommodations, basis two people to a room.

7.—Sightseeing tours as shown in the itinerary, via motor coach and private cars.

NOT INCLUDED IN THE PRICE

1.—Items of a personal nature; such as wines, laundry, etc.

Rates from other cities will be quoted upon request

Those who desire the Yellowstone National Park tour will be given rebate on their meals for the return from Salt Lake to Atlanta, as this portion will be made independently and not with the conducted party.

TRAINS AND THE A. M. A. MEETING

There should be a real incentive this year to attend the American Medical Association convention convening in Milwaukee, June 12-16.

In addition to the convention you will be permitted to visit the Century of Progress Exposition opening in Chicago on June 1st.

The occasion for this great Exposition is the Centennial of Chicago.

In the hundred years of Chicago's existence science has entered world industry and wrought amazing changes in everyday life.

The ground on which the Exposition stands was once fathoms under the surface of Lake Michigan, being reclaimed and transformed into this vast garden spot, located near the heart of the city.

The Dixie Flyer Route, operating the famous Dixie Flyer and Dixie Express daily trains, offer you the utmost in travel comfort.

Attractive Exposition rates may be taken advantage of, full details to be announced later.

These trains, originating in Florida, operating through many important South Georgia cities, afford convenient schedules from your home town.

G. B. Harris, Division Passenger Agent, Nashville, Chattanooga & St. Louis Railway, 101 Building, Atlanta, will gladly furnish you with all travel details and information.

TRAINS TO MILWAUKEE

The route of the North Western Line lies along the beautiful shore of Lake Michigan which has a natural beauty all its own. Beyond the city limits of Chicago and on through academic Evanston, the home of Northwestern University, the railway tracks are elevated to avoid congestion by city traffic.

Wilmette, Kenilworth, Winnetka and Glencoe, with their charming homes and shaded winding streets, follow in quick succession. Ravina Park, famed for its open air opera every summer; delightful Highland Park and Fort Sheridan—the army post named in honor of General Phil. Sheridan; lovely Lake Forest with its golf, polo, and palatial homes; Lake Bluff and the Great Lakes Naval Training Station; Waukegan with its fine harbor and attractive homes on the bluffs complete the galaxy of beautiful residential suburbs north of Chicago that are provided with fast suburban service.

Zion, established by Alexander Dowies for the perpetuation of his cult, is renowned for its lace-making. Kenosha is important as a manufacturing center, including one of the largest automobile plants in the world. Racine, its sister city, was settled to the North long before Chicago and is an important market and distributing point for machinery and varied products.

After this comfortable and interesting ride, our train approaches Milwaukee along the shore of Lake Michigan and we are ready to begin our convention program.

EXPLOITATION OF THE MEDICAL PROFESSION

Everywhere it is rampant—newspapers, magazines, billboards, radio. "Your doctor will tell you that. . ." "Medical science has found that . . ." "The greatest specialists in Timbuctoo say that . . ." And the rest of the story is, of course, "Use our pills or our vitamins three times a day; ask your doctor."

You are forced to compete with those who offer your patients free advice regarding medical treatment. You deliver Mrs. Blank's baby today, and tomorrow she will receive by mail samples of baby foods with complete directions how to use them. Indeed, some physician representing a commercial organization and knowing that the case is in your hands may address a personal letter to your patient offering his services free.

It has been said that ten more years of the present trend of interference in medical practice will do away with the need for private practice, of infant feeding, and other branches of medicine.

Mead Johnson & Company have always believed that the feeding and care of babies and growing children is an individual problem that can best be controlled by the individual physician. For over twenty years and in dozens of ethical ways we have given practical effect to this creed. We hold the interest of the medical profession higher than our own, for we too, no doubt, could sell more of our products were we to advertise them directly to the public.

So long as medical men tacitly encourage the present trend, so long will serious inroads continue to be made into private medical practice. When more physicians specify *Mead's Products** when indicated, more babies will be fed by physicians because Mead Johnson & Company earnestly co-operate with the medical profession along strictly ethical lines and never exploit the medical profession.

*Dextri-Maltose Nos. 1, 2, and 3; Dextri-Maltose with Vitamin B; Mead's Viosterol in Oil 250 D; Mead's 10D Cod Liver Oil; Mead's Newfoundland Cod Liver Oil; Mead's Cereal; Mead's Brewers Yeast Powder; Mead's Powdered Lactic Acid Milk Nos. 1 and 2; Mead's Powdered Whole Milk; Alacta; Mead's Powdered Protein Milk; Casec; Reolac; Sobee.

DEDICATION OF NEW MERCK RESEARCH LABORATORY

Announcement is made that Sir Henry Dale, director of the National Institute for Medical Research of England and one of the world's leading authorities on pharmacology, has been selected as the principal speaker at the dedication of the new Merck Research Laboratory, to take place at Rahway, New Jersey, on April 25th. Dr. Dale will arrive in this country shortly.

Dr. Dale was knighted in 1932, made Commander of the British Empire (C.B.E.) in 1919, Fellow of the Royal Society in 1914; and in addition, is an M.A., M.D., and Fellow of the Royal College of Physicians.

In announcing this selection, George W. Merck, president of Merck & Co., Inc., stated that Dr. Dale will be welcomed by the following guests of honor, who have accepted invitations to be present on the occasion of the formal dedication:

Representing chemistry and the chemical industry—Mr. Lammot du Pont, president of E. I. du Pont de Nemours & Co., Inc.; chairman of the board of General Motors, Inc., president of the Manufacturing Chemists' Association.

Representing pharmacy and the pharmaceutical industry—Mr. J. K. Lilly, chairman of Eli Lilly and Company.

Representing medicine and the public health service—Surgeon General Hugh S. Cumming of the United States Public Health Service.

The State of New Jersey will be represented by Governor A. Harry Moore. Over three hundred leaders in medicine and chemistry of the country will be present at the dedication.

The Merck Research Laboratory, just completed at a cost of \$200,000, is considered one of the most modern of its kind in the world.

For any form of automobile insurance, write to the State Farm Mutual Auto Insurance Company, Bloomington, Illinois, or to the office of the Medical Association of Georgia.



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THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
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Number 5

ORGANIZED MEDICINE*

MARVIN M. HEAD, M.D.

Zebulon

I deeply appreciate the honor which has been mine during the past year. It has been hard to be president of any kind of an organization. My inherent wish was to have served you better, but as you know, conditions over which I had no control altered to a considerable degree my activity. May I express my appreciation for the sympathetic co-operation with which you have received me in the various sections of the state in which we have met?

Today I shall discuss briefly my interpretation of the fundamental thought of organized medicine from 1847 to 1933. Organized medicine from a national standpoint had its beginning in 1846, when there was a meeting called by the Medical Society of the State of New York. The National Organization was completed a year later in Philadelphia, since which time the American Medical Association has fostered and helped to bring about the position of our profession to-day.

All speeches re-iterate, to some extent, that which has been said before, but the time has arrived for us to think seriously about the problems of organized medicine. I hope my words will arouse in each of you more interest in the possibilities of organized medicine. In my opinion the thing that medical organization in the United States needs most is to have a revivification of some county medical societies and a re-animation of those which have been operating on a rather low plane of efficiency. The simple truth is that our organization work with county medical societies has been allowed to lag for the last few years until

many of these organizations have become dormant.

No organization can be stronger than its component units and certainly the county medical society is the basic unit of medical organization in the United States. There are many county societies which have almost entirely suspended meetings, and I have not the slightest doubt but that there are a *considerable number* of this very kind in our own state. When a county medical society suspends operations for any considerable period of time, its members cannot be kept informed concerning matters of important interest to medicine.

Some of our county medical societies have been almost destroyed because they have resorted to the plan of having all scientific presentations made by men outside of their own jurisdiction. One of the important purposes of the county medical society is to promote scientific programs through which its own members may develop themselves in the art of expression and may pass on to their fellows the benefit of their own practical observations. This cannot be done unless we, as individual members of the county medical society, do our part in writing papers and reporting cases which are really interesting to the ordinary practitioner.

In some instances county medical societies have been seriously weakened, if not entirely destroyed, because the hospital staff meeting has been allowed to take the place of the county medical society. I have no objection whatever to a hospital staff meeting, provided it will deal with the things that the staff meeting ought to deal with, and not try to set itself up as the only promoter of scientific programs in the county. Neither do I have any objection to an occasional contribution on a county medical society program by an outside man, provided he will bring to the society which he addresses a message of practical importance.

*Presidential address before the Medical Association of Georgia, Macon, Ga., May 11, 1933.

Another thing which has tended to weaken the fundamental medical organization of the United States has been the tendency of our own members to affiliate themselves with independent organizations, which have sprung into being, most of which have little excuse for existence. This situation has resulted in the dissipation and the duplication of effort and in a division of loyalty that has been or will be disastrous. In some instances county societies have been permitted to continue their existence, on paper at least, which should long ago have had their charters revoked because the medical population in the counties which they represent is too small to maintain efficient organization. Georgia has 159 counties. There are not that many county medical societies in Georgia, and if I am correct in my idea Georgia should not have that many county societies. I believe that we would be better off from a professional and scientific standpoint with only seventy county societies.

There is another matter which I consider to be of prime importance, but about which I hesitate to speak. There has gradually developed a laxness on the part of our county medical societies in applying the measures necessary to correct unprofessional conduct. I am convinced that there has been too much winking at violations of the fundamental principles of medical ethics. In this very fact is to be found the basic reason for some of the antagonistic feeling that has developed in the public mind against medicine. I hold the opinion that the principles of medical ethics are the greatest bulwark that has ever been erected for the protection of the public and of the profession alike. I am, of course, not in favor of a wholesale application of punitive measures, but I do believe that it will be wholesome for medicine and for the public interest, if through the county medical societies, the members can be brought to a true appreciation of the ideals of medicine and to an earnest observation of the principles of medical ethics.

I have noticed time and again that complaints with respect to annual dues have been most numerous in territories where the medical organization has not been highly developed and that such complaints have been re-

duced to a minimum in the states and counties having the most efficient organization. In my opinion the Medical Association of Georgia and the county medical societies should keep in touch with any movement originating within their respective jurisdictions, which has any relation to medicine or public health.

Several of our constituent state medical associations have established committees on public relations and in some of the states these committees have been active and aggressive. It is perfectly apparent that in those states where such committees have functioned properly, a much better understanding of medicine, its aims and possibilities, has been created in the public mind, and it has been possible in such states to oppose more easily pernicious legislation and to advocate desirable legislation successfully. Organized medicine should assume leadership in those matters where the interests of the public and the interests of medicine are close together. I am satisfied that if we were able to enlist the aggressive interest of all civic organizations in our state, we would not have trouble carrying out any program and the influence of organized medicine would be tremendously enhanced.

It should not be forgotten that civic organizations are constantly being appealed to in the interest of all sorts of movements, some of which are entirely at cross purposes with the interests of organized medicine. If we sit calmly by and permit a one-sided picture to be presented to the Rotary Club, for example, we shall, of course, have no just reason for complaint if the Rotary Club is persuaded to do the wrong thing. In the same way I think it is perfectly proper and altogether desirable for the county medical society to assume leadership in public health programs. In many instances our medical societies have complained of the inequities inherent in the programs developed by health officers, in spite of the fact that they have never lifted a finger to influence the adoption of proper programs.

The Council of the Medical Association of Georgia or any other association is no doubt the most important body in the organization. Its members should be elected

because of their proved interest and efficiency, and the individual councilor should fully perform the duties that he is supposed to perform under the by-laws of his association. If it could be arranged so that every councilor would be a man well informed as to the purposes of medical organizations and as to the matters with which medical organization should deal and the requirement that he visit every county society within his district each year be rigidly enforced, the results in increased efficiency in our county societies would soon be apparent. If the districts were properly outlined and an equal number of counties could be included, the councilor would be able to visit every county medical society within the district in one week and on some days he would have time left on his hands.

In these days when theorists and agitators are exceedingly active in promoting all sorts of artificial plans for medical service, it is far more important than ever before that our component county medical societies should be well organized and that their members should be well informed concerning the various plans that are being promoted. Under the pressure of the unfavorable economic situation many physicians are finding it difficult to earn a livelihood; too many of them appear to be willing to adopt policies and practices based on the exigencies of the immediate situation with little or no thought for the ultimate effects that will be produced through the operation of such policies. This subject "Contract, Insurance or Group Practice," is hard to talk about, but I cannot refrain from speaking of it. There are a few points I would like to mention for all of us to think about as follows:

1. The welfare of the patient is of primary importance.
2. The unity of medical organization must be preserved.
3. Free choice of physician must be guaranteed.
4. Opposition to unfair competition among physicians must be maintained.
5. Sacrifice of quality of service through the action of commercial competition should not be tolerated.
6. Direct or indirect solicitation of pa-

tients through paid agents should not be tolerated.

7. Full responsibility for the determination of all questions of professional qualifications and ethics should be vested in the medical organization.

8. Compensation to physicians should be adequate for competent service.

9. Preventive or preclinical medicine must not be neglected.

10. Any change in the method of administering medical care should always be preceded by careful and thorough study of organized medicine.

I would regret to see the day when the personal relation of patient to physician ceases. Certainly after eighty-six years of well organized medicine there is no reason for a few years of depression to disrupt it. This seems as impossible as making a young man out of an old man.

At this time I think I should say something about our State Department of Health which in the past few weeks, after a hard fight in the legislature, has been changed to the old State Board of Health, composed of one member from each congressional district, two dentists and two druggists from the state at large. The majority of the fourteen members are to be physicians. It has functioned well under the director's management, but has not done the work it would have, had it an increased appropriation.

I feel that the State Board of Health in giving typhoid vaccine, diphtheria toxoid, etc. is doing that which it would not do if we doctors would take more interest in our practice of medicine and in our community work. The State Board of Health is doing its best. Are we doing our best? We do not look after the typhoid, toxoid and small-pox vaccinations as we should, and then we worry about the State Board of Health doing it for us. *Some one must act.* I believe that all these matters could be best handled by the individual practitioner. Again I say we must do *our* duty. We need the State Board of Health and need it badly and it will be busy with all of its other duties if we do ours. The work of the State Board of Health with control of malaria in Georgia has been wonderful as has all its other work.

I am sure that we are on the verge of, or are really having, state medicine. The United States is practicing medicine by taking all the ex-soldiers, their wives and children into Veterans' Hospitals and treating them. Georgia started to practice medicine by having pay patients at Alto and holding a long waiting list of poor patients. I understand they have stopped this practice now.

In conclusion, my dear friends, I wish to express again my appreciation of the unsolicited honor you have given me.

THE EFFECTS OF INJECTIONS OF OVARIAN FOLLICULAR AND ANTERIOR PITUITARY HORMONES ON CONCEPTION AND PREGNANCY IN LABORATORY ANIMALS*†

G. LOMBARD KELLY, M.D.

Augusta

Crawford W. Long Prize Essay

Introduction

From the consideration of a number of facts the idea arose that the onset of parturition might be due to an accumulation of ovarian follicular hormone or oestrin in the circulating blood. These facts are listed as follows:

First, the gestation periods of various mammals are multiples of the oestrous cycles; in the guinea pig the ratio is four to one and in the human ten to one. Second, abortions are especially apt to occur at the end of the first period in the pregnancy, less so at the second, and so on. Third, it has long been thought and recently proved by Corner and Allen (1,3,4) that the corpus luteum hormone has an essential part to play in the nidation of the ovum and in its nourishment. Fourth, Papanicolaou (15) has shown that injections of corpus luteum hormone, if continued, will postpone oestrus in the guinea pig indefinitely. This work has been confirmed by Pereya (18) and by Macht et al. (14). Fifth, degeneration of the corpus luteum in the latter stages of pregnancy have been demonstrated in the rat by Long and Evans (13), using the vital staining method.

Sixth, it has been clearly demonstrated that the follicular hormone or oestrin produces oestrus, even in spayed females. Seventh, the writer (10) has shown that injections of serum from pregnant women delay the onset of oestrus, indicating an excess of corpus luteum in women's blood during gestation. Eighth, certain animals go into oestrus, copulate and ovulate immediately after parturition, possibly indicating that the accumulating oestrin necessary for the heat period gradually came to exceed the corpus luteum and, having gained the ascendancy, rendered the continuation of pregnancy impossible.

Just about the time this theory was formulated by the writer papers were published by Margaret Smith (19) dealing with the albino rat and by Parkes and Bellerby (16) using the white mouse, their results confirming the idea.

The guinea pig was selected for the experiments herein described because it was a larger animal with a well known cycle and in order to make a histological study of the genital tissues after miscarriages, which had not heretofore been done.

In the second part of this paper, the use of anterior pituitary hormone was decided upon as a test substance because of its known effect in stimulating the ovary in the production of oestrin, the idea being that the over production of oestrin would have the same effect as injections of that hormone.

Part I—Follicular Hormone

Material and Methods

Fully mature guinea pigs, fed on a diet adequate for reproductive purposes, and housed by pairs in well kept cages, were used in this investigation. Injections were made in several groups, as follows: (a) oestrin after copulation; (b) peptone solution just after copulation for control; (c) oestrin to pregnant animals (2 to 8 weeks); (d) peptone solution to pregnant controls; (e) oestrin to males and non-pregnant females for a study of its toxicity.

The hormone used was Squibb's Amniotin and Parke, Davis & Company's Estrogen. One lot of the former assayed 500 rat units to the cubic centimeter, so that only small quantities had to be used. Injections as a rule were given over a period of 6 days in equal doses, though some were given for only 3 days, or less, and others as long as 23 days. In the later stages of pregnancy, very large doses of

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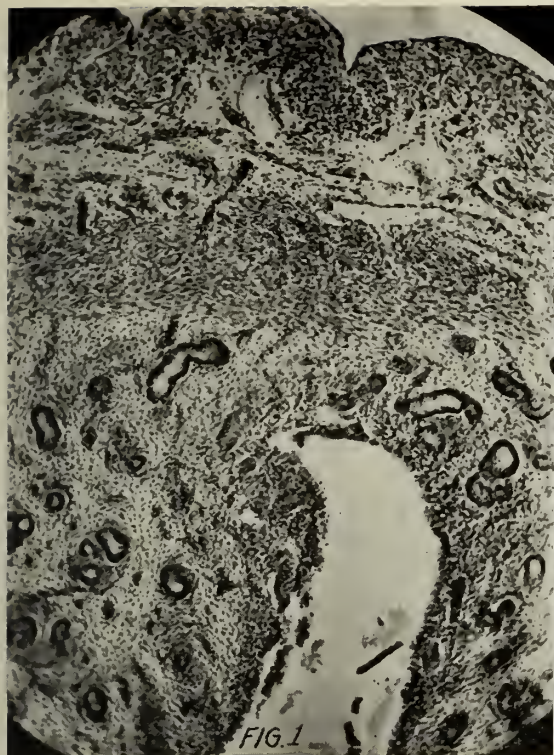


Fig. 1. Normal non-pregnant guinea pig uterus.



Fig. 2. Non-pregnant guinea pig uterus after six 100 rat unit injections of oestrin. Some enlargement and increased vascularity, but no destruction as seen in Figure 3, with half the dose.

oestrin were used, because Parkes and Bellerby (16) found that in the mouse about twice as much hormone was necessary to interrupt pregnancy then as in the first stages.

One per cent peptone solution was used for control injections and was given in daily doses from 0.5 to 1 cubic centimeter over periods varying from 6 to 12 days.

Results

Prevention of conception controls. Three animals received each a half cubic centimeter of one per cent peptone solution on 6 successive days. Two conceived and one did not. (Table I.)

Pregnant controls. Five animals received doses varying from 1 to 5 cubic centimeters of one per cent peptone solution over periods ranging from 9 to 12 days. The course of pregnancy was not affected in any case, though the quantity injected varied from a total of 11 to 45 cubic centimeters. (Table II.)

Prevention of conception. The dosage given to sixteen animals in this group varied from a total of 10 to 120 rat units, administered in equal doses beginning the day of copulation over periods of from 2 to 6 days. None of the animals conceived. (Table III.)

Copulation was checked in each case by the finding of fresh sperm in vaginal smears.

Animals about two weeks pregnant. Eight animals in this group were pregnant from 12 to 17 days and received from 75 to 150 rat units, given in 6 equal injections. All the animals that received 150 units aborted. Of the 5 remaining animals, receiving 75 units each, 4 aborted and 1 was delivered at term. None of these animals died. (Table IV.)

Abortion was indicated by the presence of blood in the vaginal smears. Again, the conception rate after copulation would not be less than seventy-five per cent, so that at least three-fourths of the animals could have been assumed to be pregnant any way.

Animals about four weeks pregnant. One group of these animals was given large doses of hormone and the other small doses and an effort was made to determine the smallest effective dose.

Of 12 animals in the first group the duration of pregnancy varied from 27 to 32 days. Ten animals received a total dosage of 300 units. Of these 6 aborted and 4 died with retained fetuses. Two animals received 700 units each and one aborted and the other died with retained fetus. Of the whole group, 7 aborted and five died with retained fetuses. Since 3 of the animals that aborted died later, the total mortality was 8 out of 12. (Table V.)

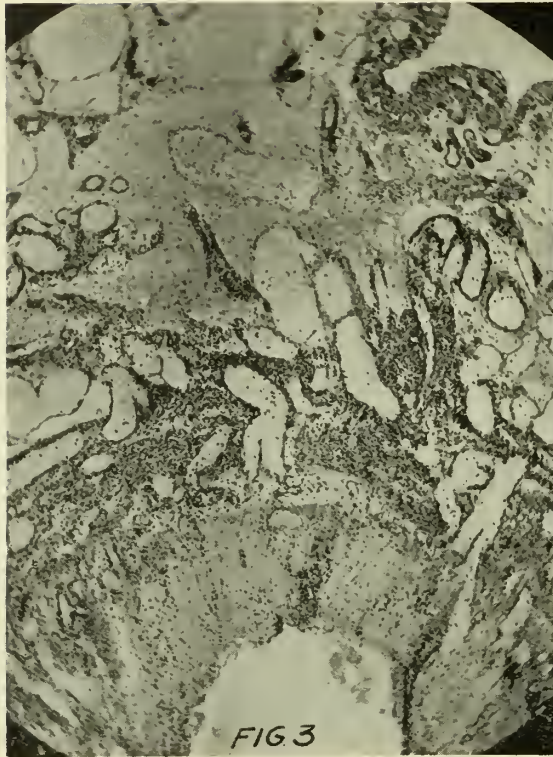


Fig. 3. Non-pregnant guinea pig uterus after six 50 rat unit injections of oestrin. Marked vascularity and destruction of uterine glands.

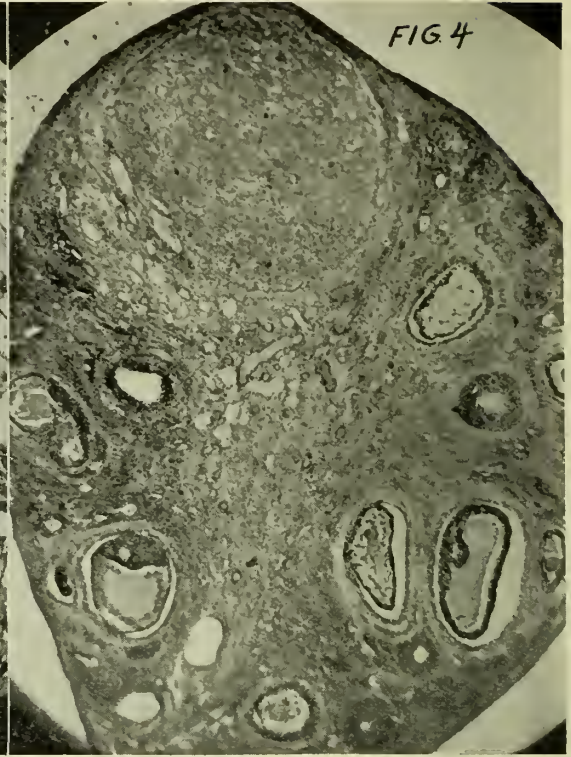


Fig. 4. Guinea pig ovary from pregnant animal after six 100 rat unit injections of oestrin, showing corpus luteum apparently unaffected; also many atretic follicles.

No such heavy toll was taken by the smaller dosage in the second group. Seven animals were used. Three were given 150 units, two 120 units, and two 90 units each. Of these 6 aborted and one went on to normal delivery. The last animal was one of two that received only 90 units. (Table VI.)

Animals six to eight weeks pregnant. There were two groups of these, one receiving quite large doses and the other smaller doses of the hormone.

Twelve animals pregnant from 42 to 56 days comprised the first group. The total dosage varied from 600 to 1,150 units. Only 2 miscarried. The remaining 10 died with retained, macerated fetuses. (Table VII.)

Five animals pregnant from 42 to 46 days received from 300 to 480 rat units and all of these died with retained macerated fetuses. (Table VIII.)

Toxicity of hormone in males and non-pregnant females. On account of the fact that a considerable percentage of the animals in advanced pregnancy died after injections of the hormone, it was desirable to learn if the hormone was toxic in large doses. While the results of the experiment are somewhat conflicting, it is nevertheless apparent that these animals can in many cases receive as much as 600 rat units of the female sex hormone with no ill effects.

Some of the test animals in the first series of eleven were small and as the mortality was high in this group, (Table IX), a second group of 6 fully matured perfectly healthy animals was used. There were 3 males and 3 non-pregnant females in this group. All received 600 rat units and none died or became ill. (Table X)

Gross and microscopic study of uterus, placenta and ovaries. The greatly increased vascularity of the genital organs after injections of the female sex hormone was always the most striking feature. It could be observed in the gross and was very prominent in microscopic preparations. There was, nevertheless, considerable variation among different animals. It is possible that the stage of the oestrous cycle when the injections were made had some effect. (Figs. 1, 2 and 3).

Though it is normal for the uterus to be hyperaemic in pregnancy, still, it was possible to observe very marked changes by making sections through the uterine wall and placenta with the latter in situ. In the test animals the chorionic villi were pressed upon by large lakes of blood and were damaged in some cases almost to the point of destruction. (Figs. 5, 6, 7 and 8).

The ovaries sometimes presented quite a large number of follicles and at times only one large cyst, sometimes they appeared al-

most normal. Greater vascularity was apparent microscopically, but the changes in this organ were not so marked as in the uterus and placenta.

There seemed to be no change in the corpora lutea of pregnancy and the Graafian follicles were atretic. (Fig. 4).

During the course of the injections it was the rule for the vagina to be open, but the smears were not typical of oestrus. The females were isolated and no attempt was made to breed them.

Although it was usually found at autopsy that the junction of uterus and placenta was necrotic, this may have been due to the fact that the fetuses died before the mother did.

Animal No.	Cop. Date	Time	Peptone c.cm.	Injections	Total c.cm.	Result
1149	6-5-29	9:10 a.m.	0.5	6	3	Conceived
1175	6-5-29	4:50 p.m.	0.5	6	3	Conceived
1057	6-5-29	5:10 p.m.	0.5	6	3	Estrus 6/23

Table 1. Prevention of conception controls.

Animal No.	Cop. Date	Days Pregnant	Peptone c.cm.	Injections	Total c.cm.	Result
1152	2-22-29	28	2½	9	22½	Unaffected
1154	2-28-29	40	5	9	45	Unaffected
1040	3-22-29	42	1	11	11	Unaffected
1127	3-28-29	35	1	12	12	Unaffected
1139	4-3-29	28	1	12	12	Unaffected

Table 2. Pregnant controls.

Discussion

The ease with which conception can be prevented in the guinea pig is noteworthy. Small doses given just after copulation (as low as 10 units total in 5 animals) are sufficient. It may be considered that at this time the corpus luteum has not developed far enough to furnish a quantity of hormone sufficient to counteract the oestrin. The necessity of the corpus luteum hormone for nidation of the ovum has been nicely demonstrated in the recent experiments of Corner and Allen (1, 3, 4), and had long been so considered (Fraenkel 7, Bouin and Ancel, 2).

The ease with which early pregnancy can be interrupted by this method is in full ac-

Animal No.	Cop. Date	Time	Rat Units	Injections	Total Units	Prevent Conception	Return To Heat
1054	4-26-29	10:55 a.m.	20	6	120	Yes	5-13-29
1145	5-13-29	12:55 p.m.	20	6	120	Yes	5-24-29
1058	5-20-29	9:10 a.m.	20	6	120	Yes	5-30-29
1104	6-12-29	10:25 a.m.	20	6	120	Yes	6-24-29
1131	6-14-29	10:15 a.m.	20	6	120	Yes	6-24-29
1022	6-14-29	10:32 a.m.	20	6	120	Yes	6-25-29
1270	12-14-29	4:00 p.m.	10	6	60	Yes	12-26-29
1266	12-23-29	11:00 a.m.	10	6	60	Yes	1- 5-30
1028	2-14-30		5	3	15	Yes	2-28-30
1118	3- 2-30		5	3	15	Yes	3-17-30
1199	2-20-30		5	3	15	Yes	3- 7-30
1195	3-20-30		5	2	10	Yes	4- 3-30
1273	3-20-30		5	2	10	Yes	4- 3-30
1060	3-24-30		5	2	10	Yes	4- 8-30
1193	3-24-30		5	2	10	Yes	4- 8-30
1231	3-28-30		5	2	10	Yes	4-10-30

Table 3. Prevention of conception.

Animal No.	Days Pregnant	Rat Units	Injections	Total Units	Aborted	Delivered	Died
1273	17	25	6	150	Yes	No	No
1274	17	25	6	150	Yes	No	No
1251	12	25	6	150	Yes	No	No
1254	12	12.5	6	75	Yes	No	No
1202	15	12.5	6	75	Yes	No	No
1267	17	12.5	6	75	No	Yes	No
1256	14	12.5	6	75	Yes	No	No
1258	13	12.5	6	75	Yes	No	No

Table 4. Animals about two weeks pregnant.

cord with the results of Parkes and Bellerby (16), using the white mouse.

It is certain that the abortions were not due to handling or to injection of a foreign substance. The control animals were given from 50 to 100 per cent more injections of peptone solution and in volumes far greater than were used in the test animals (from 11 to 45 cubic centimeters) yet not one had its pregnancy interrupted.

While the cause of death of the fetuses and mothers in the latter half of pregnancy is problematical, the great blood sinuses and the consequent pressure atrophy of the chorionic villi would seem to be related to it. Possibly the reason that the mothers do not miscarry

after the young have died in situ is that the excessive amount of oestrin upsets the balance between it and the corpus luteum hormone that Hisaw (9) has shown to be necessary for the great dilatation of the pubic symphysis required for parturition. (Figs. 9, 10).

Animal No.	Days Pregnant	Rat Units	Injections	Total Units	Aborted	Delivered	Died
1120	32	50	6	300	Yes	No	Yes
1265	28	50	6	300	No	No	Yes
1250	28	50	6	300	No	No	Yes
1131	28	50	6	300	Yes	No	No
1012	31	50	6	300	No	No	Yes
1263	29	50	6	300	Yes	No	No
1264	29	50	6	300	Yes	No	No
1255	31	50	6	300	Yes	No	Yes
1125	27	50	6	300	No	No	Yes
1218	30	50	6	300	Yes	No	No
1029	30	50	14	700	No	No	Yes
1041	28	50	14	700	Yes	No	Yes

Table 5. Animals about four weeks pregnant. (first group)

Animal No.	Days Pregnant	Rat Units	Injections	Total Units	Aborted	Delivered	Died
1261	28	25	6	150	Yes	No	No
1252	28	25	6	150	Yes	No	No
1266	28	25	6	150	Yes	No	No
1057	26	15	6	90	Yes	No	No
1231	26	20	6	120	Yes	No	No
1156	27	20	6	120	Yes	No	No
1158	27	15	6	90	No	Yes	No

Table 6. Animals about four weeks pregnant. (second group)

It might be supposed that the mothers succumb from sapremia after the deaths of the young, which are macerated at autopsy. Post mortem findings have been essentially negative.

It is very improbable that most of the mothers died from the injections alone, since in one series of six mature, well nourished animals, none became ill after the injections of 600 rat units of hormone. It should be remembered that an optimum dosage might be found that would terminate pregnancy without the death of the mother.

Animal No.	Days Pregnant	Rat Units	Injections	Total Units	Aborted	Delivered	Died
1153	44	100	9	900	No	No	Yes
1154	56	50	23	1150	No	No	Yes
1118	49	50	13	650	Yes	No	No
1051	42	50	15	750	No	No	Yes
1127	45	100	6	600	No	No	Yes
1110	42	100	6	600	No	No	Yes
1257	42	100	6	600	Yes	No	No
1272	42	100	6	600	No	No	Yes
1249	42	100	6	600	No	No	Yes
1247	43	100	6	600	No	No	Yes
1260	44	100	6	600	No	No	Yes
1262	43	100	6	600	No	No	Yes

Table 7. Animals six to eight weeks pregnant. (second group)

Animal No.	Days Pregnant	Rat Units	Injections	Total Units	Aborted	Delivered	Died
1003	46	80	6	480	No	No	Yes
1010	44	80	6	480	No	No	Yes
1032	44	60	6	360	No	No	Yes
1246	44	60	6	360	No	No	Yes
1059	42	50	6	300	No	No	Yes

Table 8. Animals six to eight weeks pregnant. (second group)

Animal No.	Rat Units	Injections	Total Units	Date Injected	Died
1275	100	3	300	1929 12- 7 to 9	12-10
1276	100	6	600	12-12 to 17	Lived
1282	100	3	300	12- 9 to 11	12-12
1283	100	3	300	12- 9 to 11	12-12
1040	100	1	100	12-15	12-15
1118	100	6	600	12-15 to 20	Lived
1207	100	6	600	12-15 to 20	12-26
1245	100	6	600	12-15 to 20	12-27
1285	100	2	200	12- 9 to 10	12-11
1286	100	2	200	12- 9 to 10	12-11
1047	100	6	600	12-15 to 18	12-19

Table 9. Toxicity tests. (group one)

It is interesting to observe that apparently no compensatory hypertrophy occurs in the corpora lutea after injections of large doses of oestrin.



Fig. 5. Chorionic villi as seen in normal pregnant control guinea pig.

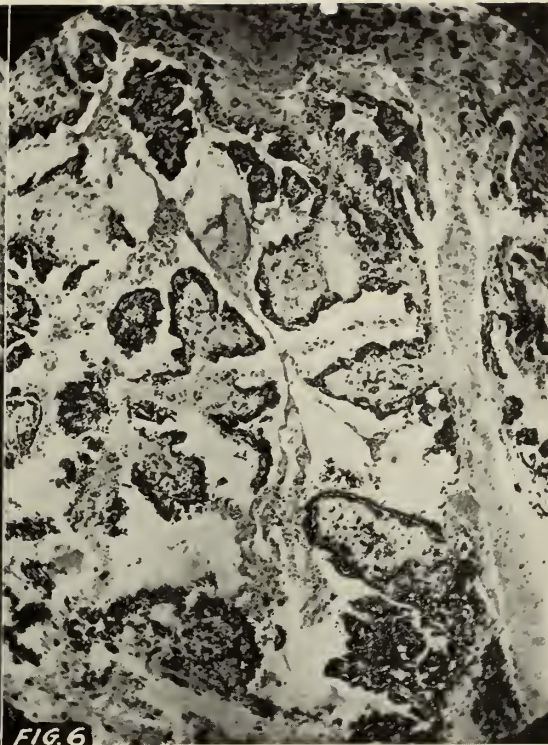


Fig. 6. Chorionic villi after six 100 rat unit injections of oestrin. Note shrinkage and fragmentation.

A study of the mammary glands during and after the injections was not made. Parkes and Bellerby (17) injected oestrin into white mice during lactation and succeeded in bringing them into oestrus ahead of time, but no report on the histological changes in the mammary gland was made.

Courrier (5) does not believe that the termination of pregnancy is due to the upset of any balance between the oestrin and the corpus luteum hormones, but that it is due to muscular contractions of the uterus set up by the former. If correct, this does not explain the prevention of conception, which is certainly not due to muscular action.

It must be admitted that unknown factors may have something to do with the termination of pregnancy in these experiments, to some peculiar effect on the uterus, or placenta, or both. Doisy and associates (12) have recently shown that injections of crystalline female sex hormone (theelin) into white rats has no effect on pregnancy. The writer has begun to check this question in the guinea pig, but has not yet had time to draw definite conclusions. If Doisy's obser-

vations in the rat is corroborated in the guinea pig, then the inference seems unmistakable that there was some substance in the Amniotin and Estrogen other than the hormone that produced the results obtained. Just what this substance was remains to be determined.

Part 2—Anterior Pituitary *Material and Method*

The idea that the ovary might be stimulated to an overproduction of oestrin by injections of anterior pituitary substance or hormone was suggested by the well known work of Smith and Engle (20) and of Zondek and Aschheim (22) on the relation of the anterior pituitary hormones to the gonads.

After the present investigation was undertaken, a report by Evans and Simpson (6) was seen, which stated that "occasionally premature birth resulted from the stimulated production of folliculin."

Subsequently followed the differentiation of the pituitary hormones and the knowledge became general that there are two such principal hormones affecting the ovary, one a follicle-stimulating and the other a luteinizing hormone. These separated hormones were not available for this investigation, though an extract from the urine of pregnant

Animal No.	Rat Units	Injections	Total Units	Date Injected	Result
1046	100	6	600	1930 1-20 to 25	Unaffected
1237	100	6	600	1-20 to 25	Unaffected
1238	100	6	600	1-20 to 25	Unaffected
1001	100	6	600	1-20 to 25	Unaffected
1007	100	6	600	1-20 to 25	Unaffected
1104	100	6	600	1-20 to 25	Unaffected

Table 10. Toxicity tests. (group two)

Animal No.	Sperm Found	Injections	Each (glands)	Total (glands)	Prevent Conception	Died
1501	12-15-30	12-16-30 12-17-30	3 2½	5½	No	No
1515	11-17-30	11-17-30 11-18-30	1 6	7	No	No
1520	12-15-30	12-16-30 12-17-30	2 2½	4½	No	No
1524	11-22-30	11-24-30	5	5	No	No
1526	11-20-30	11-21-30 11-22-30	3 6	9		11-23-30
1527	12- 8-30	12- 8-30 12- 9-30	2 3	5	No	No
1528	11-29-30	12- 1-30 12- 2-30	3 3	6		12- 3-30
1529	11-28-30	12- 1-30 12- 2-30	3 3	6	No	No
1530	12-18-30	12-19-30	3	3	No	No
1540	12- 5-30	12- 5-30	4	4		12- 6-30
1541	12-16-30	12-16-30 12-17-30	2 4	6	No	No

Table 11. Test animals injected with freshly expressed juice of anterior lobe of bovine hypophysis just after copulation.

Animal No.	Days Pregnant	Injections	Each (glands)	Total (glands)	Aborted	Died
1516	27	12- 1-30 12- 2-30	6 6	12	12- 2-30	12- 3-30
1519	52	1- 2-31	3	3	1- 3-31	1- 4-31
1515	47	1- 3-31	3	3	1- 4-31	1- 5-31
1524	41	1- 2-31 1- 3-31	3 3	6	1- 4-31	1- 5-31

Table 12. Pregnant test animals injected with freshly expressed juice of anterior lobe of bovine hypophysis.

women was supplied by a manufacturer of biologicals.* There is no doubt that both hormones were present in this extract, though the luteinizing element attracted more atten-

(*Kindly contributed by Dr. E. A. Sharp of Parke, Davis and Company.)

Animal No.	Sperm Found	Injections	Each c.cm.	Total Units	Conception	Died
1501	3-25-31	3-26-31 to 3-30-31 (5)	2	500	Yes	No
1533	3-10-31	3-11-31 to 3-15-31 (5)	2	500	No	No
1536	2-26-31	2-27-31 to 3-2, 3, 4-31 (5)	1	250	No	No
1550	3- 9-31	3-11-31 to 3-15-31 (5)	2	500	No	No
1555	3-10-31	3-11-31 to 3-15-31 (5)	2	500	No	No
1556	3-28-31	3-29-31 to 4- 2-31 (5)	2	500	No	No
1564	3- 2-31	3- 3-31 to 3- 7-31 (5)	2	500	No	No
1565	2-14-31	2-16-31 to 2-18-31 (3)	3	450	Yes	No

Table 13. Test animals injected just after copulation with extract of urine from pregnant women. (50 rat units per c. cm.)

tion, due to its terminal effect upon the ovaries of test animals.

It is interesting to observe in this connection that Lepine (11) determined the co-existence of both antagonistic hormones and found that one brought about follicular maturation of the adolescent female and abortion of the pregnant female, while the other caused the formation of hemorrhagic follicles and the yellow bodies. Werchratzky (21) reported that injection of a hormone extract from the urine of women in the second period of pregnancy into pregnant animals resulted in abortion. Gastomirovic (8) reported ovulation produced by the luteinizing hormone (Prolan B).

In addition to the urine extract, freshly expressed juice of the anterior lobes of bovine hypophyses was used. The glands were obtained from the slaughter house and the injections made within less than two hours after the animals were killed. The capsules of the glands were stripped off and the organs laid in half in the midsagittal line. The anterior lobe was separated from the remainder of the gland and then finely minced. The mass of minced tissue was next placed within a special press of very powerful design and the juice squeezed from it. The juice was then strained and injected subcutaneously.

The injections were given over a period of several days. A solution of 1 per cent peptone was injected into a series of control animals.

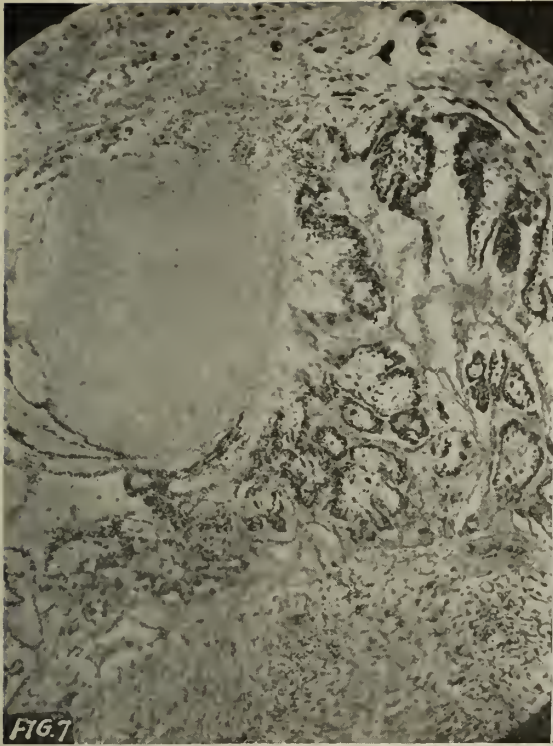


Fig. 7. Same as Figure 6, showing large area filled with blood.

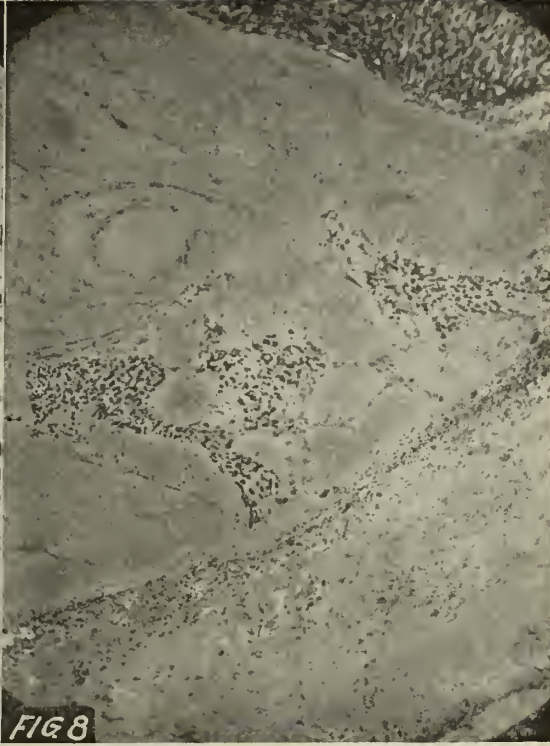


Fig. 8. Chorionic villi after six 100 rat unit injections of oestrin, showing extreme degree of destruction, with enormous blood invasion.

The same type of animals were used in this investigation as were used in the oestrin experiments. Copulation was checked by finding fresh sperm in the vagina. If mated without the finding of sperm, the animals were isolated until definitely pregnant and were then used for the abortion test. Unless examination is made fairly soon after copulation, sperm may not be demonstrable.

For prevention of conception and effect on pregnancy the same control animals are listed for this investigation as for the preceding. (Table I and II).

Four series of test animals were used. Two series were given the fresh juice of the bovine pituitaries and two the urine extract. Animals that had just copulated and others of various stages of pregnancy were used.

One series of 11 animals injected after copulation to test prevention of conception received the juice of from three to 10 hypophyses. Eight of these animals conceived and three died. Since conception was not prevented in any of the animals that survived, the inference is clear. The cause of death in the three that died was presumably of protein intoxication from the injected material. (Table XI).

A second series of four definitely pregnant animals were given each the juice of from 3 to 12 glands. All of these animals died, prob-

ably from the same cause as those listed in Table XI. All aborted within a day following the last injection and died within two days after that injection. The one hundred per cent mortality in this series contrasts with that of twenty-seven per cent in the preceding series and was probably due to the fact that the animals were pregnant. (Table XII).

The extract from urine of pregnant women was injected into a series of 8 females just after copulation (that is, beginning the same day) with the result shown in Table XIII. Each animal received a total of from 5 to 10 cubic centimeters of the extract, each cubic centimeter containing 50 rat units of the hormone, making a grand total of from 250 to 500 units. Six of these animals conceived and two did not. It is of interest that there were no deaths in this series. Since all matings can not result in conception, it can be seen that with a seventy-five per cent conception rate, no particular interference with conception was to be observed here. (Table XIII.)

In the last series 14 pregnant animals each received from 5 to 27 cubic centimeters of the extract. Of these animals 11 aborted, 1 delivered at term and 2 died. Table (XIV).

During this investigation it was discovered that the urine extract was not stable and new

Animal No.	Days Pregnant	Injections	Total c.cm.	Total Units	Aborted	Died
1501	44	1-28-31 to 1-31-31 (4)	2	400	2- 6-31	No
1506	56	1-28-31 to 1-31-31 (4)	2	400	2- 3-31	No
1517	44	1-28-31 to 2-4 to 7-31 (5)	1	250	No	2- 7-31
1520	44	1-28-31 to 2-4 to 5-31 (3)	2	300	2- 5-31	No
1523	39	4-10-31 to 4-15-31 (6)	2	600	4-16-31	No
1527	52	1-28-31 to 1-31-31 (4) 2-4 5-31 (2)	1 3	500	2- 5-31	No
1527	47	4-10-31 to 4-15-31 (6)	2	600	4-16-31	4-17-31
1529	61	1-28-31 (1)	2	100	1-29-31 (almost term)	No
1530	41	1-28 31-31 (4) 2-9 10-31 (2) 2-16-31 (1) 2-17 18-31 (2)	1 3 5 6	1350	Delivered at term 2-23-31 (one alive)	No
1536	43	4-10-31 to 4-15-31 (6)	2	600	4-16-31	No
1541	43	1-28-31 to 1-31-31 (4) 2-4 5 6-31 (3)	1 3	650	2- 6-31	No
1550	32	4-10-31 to 4-15-31 (6)	2	600	4-19-31	No
1556	13	4-10-31 to 4-15-31 (6)	2	600	4-17-31	No
1557	23	4-10-31 to 4-15-31 (6)	2	600	4-19-31	No

Table 14. Pregnant test animals injected with extract of urine from pregnant women. (50 rat units per c. cm.)

material was frequently received for carrying on the work. The use of the deteriorated extract no doubt explains the failure to produce abortion in animal No. 1530 in table 6, though material was injected that should have contained 1350 units, much more than was necessary in any other animal. Even up to the present no stable preparation of this kind is obtainable.

To determine the potency of the two products used in making the injections, some of each was injected in both immature guinea pigs and white rats. It was found that the urine extract had the more pronounced effect in producing hypertrophy of the internal genitals, but that the fresh juice of hypophysis was also active could be seen by its luteinizing effect on the ovaries of the immature



Fig. 9. Guinea pig pelvis, virgin, showing symphysis united.

Fig. 10. Guinea pig pelvis, multipara, showing wide separation of symphysis immediately after delivery.

animals. The result of the injections of the urine extract is shown in figures 11 and 12.

Serial sections were made of the internal organs of generation of these immature animals and also of the internal organs of a test animal (No. 1527) that had died after aborting from the injections of the urine extract. In all cases the ovaries show a luteinization of all follicles to form a compact lobulated mass. Near the centers of many follicles ova can be seen, surrounded by the lutein masses. (Fig. 13).

While the results of these experiments are consistent as far as the effect of the two different materials used is concerned, the interpretation of both results is not so simple.

As soon as the injections are made it is probable that stimulation of the follicular apparatus begins, to be followed by the luteinization process. Since about four days are required for the fertilized ovum to pass down the tube and arrive in the uterus, it may be that the formation of lutein cells has advanced far enough to elaborate sufficient progesterin (Corner and Allen, 4) to take care of the embedding and subsequent nourishment of the early ovum by the time it reaches there. If this is the case, it accounts for the failure of the injections to prevent conception.

The termination of pregnancy may be attributed to the production of oestrin by follicle stimulation, for as shown by the work of Parkes and Bellerby (16), Margaret Smith (19) and by the present investigation injections of oestrin in sufficient amounts brings normal pregnancy to an end. It is true that Doisy and his co-workers, as pointed out above, have shown that a highly purified preparation of oestrin (theelin) had no detectable effect on the length of the gesta-



Fig. 11. Internal genital organs of immature albino rat used as control.

Fig. 12. Internal genital organs of a litter mate of the control animal of Figure 1 after injection of 2 cf. of urine extract daily for 5 days (500 units). Hypertrophy marked.

tion period of the albino rat. However, this needs to be confirmed for the guinea pig. The fact is that pregnancy was terminated in these experiments by the injection of preparations that produced a marked terminal luteinization of the ovaries.

Some authors claim that hormones extracted from the urine of pregnant women are not true pituitary hormones and others claim the corpora lutea formed after their injection consist of pseudo-lutein cells. If the observation of Doisy and his associates just mentioned (that pure oestrin does not terminate pregnancy) is really true, it must be considered possible that some other element in the oestrin may have been the causative agent in terminating the pregnancies. So in this instance the abortions may have been due to some extraneous substance in the extracts.

It is worthy of mention that in terminating pregnancies in the guinea pig with oestrin that there was a very high mortality of animals in the second half of gestation, whereas in the present experiments (using the urine extract), the mortality after abortion at all stages of pregnancy was quite low. The inference is that the pituitary hormone did not upset the balance between the oestrin and the corpus luteum necessary for the dilatation of the pelvic ligaments of the guinea pig (Hisaw, 9), so that the mothers did not die from sapremia on account of retained dead fetuses.

Conclusions

1. Small doses of female sex hormone (as low as 10 rat units), given in broken doses, will prevent conception in the guinea pig.

2. On increasing the dosage to 75 units and more, abortions and miscarriages result, though in the later stages of pregnancy the young perish in utero and the mothers often die also.

3. Injections of freshly expressed juice of anterior pituitary or of the extract of



Fig. 13. Microphotograph of ovary of immature guinea pig after five daily injections of 100 units each of urine extract, showing massive luteinization and included ova.

pituitary-like hormone from the urine of pregnant women into sexually mature female guinea pigs just after copulation does not prevent conception.

4. Injections of the same two products into pregnant animals almost invariably cause abortion or miscarriage.

5. Whether the results obtained in this investigation are due to the hormones or to other substances contained in the injected material remains to be determined.

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MALIGNANT ENDOCARDITIS*

Report of Case

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All vegetative endocarditis is bacterial in origin and malignant endocarditis is in reality an inflammatory condition of the heart valves resulting from and being a part of a general infection. But endocarditis is seldom a simple infection confined to the endocardium alone, but is usually accompanied by some degree of myocarditis. This factor will explain the precordial pain so often noted in these cases.

The endocardium, which is composed chiefly of endothelium, lines the heart and takes part in the formation of the valves.

Inflammation of this membrane is usually confined to that part covering the valves so that when one hears the term endocarditis his attention is directed toward the valves rather than the endocardium as a whole. The pathologic process of endocarditis results in the formation of a necrotic area made up of a mass of fibrin, bacteria and necrotic tissue. If necrosis extends, a part of this mass may become detached in the form of emboli. These emboli may be swept by the bloodstream to any part of the body. In the more chronic type a protective zone of leukocytes soon infiltrates the margins of the infected area and

in time a chronic inflammation replaces the acute process.

The manifestations resulting from malignant endocarditis are really two-fold: those referable to the septicemia and those dependent upon the valvular involvement. The disease may simulate typhoid fever or acute pyemia; it may be afebrile or it may exhibit a recurrent febrile exacerbation of a pre-existing valvular disease. There is still another form which was first described by Osler as "Chronic Septic Endocarditis". This type of endocarditis runs a prolonged course, from three months to one or even two years. The onset is usually rather abrupt. There may be a history of intrauterine manipulation, abscessed teeth, infected tonsils, an infected wound or abscess. The symptoms at this stage are those of pyemia rather than endocarditis. Occasionally a case of this kind may occur with a negative blood culture, due perhaps to germs being in the blood intermittently. In the majority of instances, the organisms can be cultured and they are most often found to be a strain of streptococcus.

In some very mild cases the only symptoms may be a slight rise of the afternoon temperature, lassitude, dyspnea on exertion and a heart murmur. This is a point well to remember in considering the differential diagnosis, but even in these mild cases the blood culture is usually positive. Practically all cases of malignant endocarditis show a marked secondary anemia and pain in the cardiac region or tenderness at the lower end of the sternum. Embolism to any part of the body will, of course, give symptoms referable to that particular region. In this type of heart disease edema is not always present, but sometimes develops as the anemia becomes profound. Often the patient gives a history of rheumatic disease at some time in the past.

I have given you some of the conditions or symptoms encountered in conjunction with this disease. In addition there will sometimes develop severe constitutional symptoms without a history of previous infection. These symptoms will consist of chills, sometimes repeated on subsequent days, fever, prostration and perhaps profuse sweating. The skin has a peculiar sallow tint and is dry except during and just after the sweats. Involvement

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of the heart valves may manifest itself early or it may be delayed several days and so indistinct as to leave the diagnosis in doubt, as far as the heart is concerned. Even in those cases where the involvement is early the physician, unless he was previously familiar with the patient's condition, may be undecided at first as to whether the cardiac lesion is a recent development or whether it existed before the onset of the present illness.

The heart-beat is usually rapid and in proportion to the fever during most of the disease, but in the late stage the fever tends to decline and the heart rate remains fairly constant or increases. The blood pressure and the pulse pressure is always low. The pulse is not dicrotic and is practically always feeble.

The mitral valve is most often involved, the aortic next, but the virulence of the disease may be so great that all of the valves may become involved. In the case here reported the pulmonic valve showed the greatest changes and this is unusual as evidenced by the report of Pitt who examined 16,000 cases at autopsy at Guy's Hospital and found lesions of the pulmonic valve only twenty-four times. In many cases structural changes have been observed in which no murmur could be detected during life. This is probably due to such low pulmonary pressure that it prevented the blood from regurgitating with sufficient force to produce vibrations. As circulatory failure progresses the liver may become engorged and other common evidences of heart failure manifest itself.

The temperature range is variable, but usually the extreme variations occur within the day. In the latter stages of the disease there is often a drop in the temperature and this is likely to incite false hope for recovery. Bear in mind, however, that if and when this drop comes, the pulse rate will continue about the same or may even become faster.

In the beginning of the disease the heart is normal in size, but as the days pass by, it hypertrophies until finally it can hypertrophy no more and then it becomes dilated. So at autopsy cardiac hypertrophy and dilatation is the rule. The examination of the heart otherwise will reveal findings dependent upon the values involved and whether a stenosis or regurgitation is present. At times there

may be an associated pericarditis and as already pointed out there is always an associated myocarditis.

I have spoken of the marked anemia usually present in these cases. The white cell count is generally increased with a relative increase in the polynuclears, especially in the early stage, but after a number of weeks the picture changes somewhat. Apparently nature has about spent her energy and the total number of leukocytes decreases. The relative increase in the polynuclears, however, remains longer and it is not until very near the end that this condition is changed, when they too begin to show a drop.

The differential diagnosis of malignant endocarditis is often difficult. It may simulate a number of diseases, among the most important and most frequent being typhoid, typhus, tuberculosis, malaria, tularemia, undulant fever and rheumatic fever. All of these can be classed as long fevers and have several points in common with the condition under consideration. I will not discuss the differential diagnosis of each of these conditions. The diagnosis of malignant endocarditis resolves itself into a careful history, not necessarily a lengthy one, but one calculated to bring out the essential points plus a complete physical examination with due consideration for any and all findings.

The laboratory work will assist in arriving at a diagnosis and especially is this true when a positive blood culture is obtained early. One would do well to bear in mind that a blood culture is often reported negative after seventy-two hours and then after several more days of incubation will become positive. Then again there is the possibility that one culture will be negative while another will be positive. Urinalysis will usually show very little of interest. There may be some red blood cells present in the urine as a result of glomerular embolism. The blood chemistry is usually normal. Sputum and x-ray examinations will assist in excluding tuberculosis and also the x-ray will show the size of the heart. I would not attach a great amount of importance to one blood count or one smear for malaria. Typhoid, for example, often shows a leukocytosis in the early stage. Tuberculosis, with a mixed infection, will show the

same. Repeated blood studies are important and will throw considerable light on the question and therefore be of great help in solving the diagnostic problem. I would stress one point in particular; in a patient who is acutely ill, who has fever and in whom there is present a cardiac murmur, think of malignant endocarditis. It is my opinion that too often the proper consideration is not given to a cardiac murmur and there are times, perhaps, when a murmur is overlooked due to carelessness. One should bear in mind that the loudest heart murmur does not signify the greatest trouble.

The host of different agents used in the treatment of malignant endocarditis indicates that treatment is still very unsatisfactory. The general management, such as complete bed rest, proper diet, fresh air, freedom from worry and the like is important, but a detailed discussion in this paper is not necessary. Vaccines are seldom used. I think streptococcic serum should be given a trial and some writers have reported good results with it.

There have been many drugs used intravenously in this condition. Among these may be mentioned 10 per cent magnesium sulphate, guaiacol with sodium salicylate, sodium salicylate solution alone, salvarsan and sodium cacodylate. More recently the drugs most used as intravenous medication, have been Pregl's iodine, metaphen, gentian violet and mercurochrome. Some writers have reported good results from the use of one or the other of these drugs. Some argue against their use on the theory that only those germs floating in the blood stream are reached while those beneath the thrombi or buried in the heart valve are not reached. They argue also that any solution put into the bloodstream which is harmless to the general system is not going to affect the organisms. Theoretically this line of reasoning seems sound, but practical results do not indicate its value.

Streptococci, like other organisms, are of different strains. Some are more virulent, some are less virulent. Some patients have a greater resistance than others by reason of the anti-bodies produced within the body. May we not consider it possible then, if we put a solution into the blood that will destroy some of these organisms or even lower their

vitality materially and keep repeating this, that nature may finally win out?

In the light of our present knowledge I believe the best form of treatment is as follows:

(1) General symptomatic treatment, (2) streptococcic serum when a diagnosis is made followed by one of the dyes, (3) digitalis for the heart muscle when indicated. Transfusions are helpful. Some day, perhaps in the near future, some form of intravenous therapy will be perfected which will be specific or nearly specific in the treatment of this condition.

The case I wish to report is from the medical service of the white unit of Grady (Municipal) Hospital. It is rare in that the lesion was most pronounced on the pulmonary valve and even extended well into the pulmonary artery. As far as diseased conditions are concerned the pulmonary area of the heart is seldom affected. This is probably due to the relative immunity of the right heart as a result of lowered oxygen tension and partly to rarity of pre-existing valvular lesions on the right side.

REPORT OF CASE

A house wife, aged 34, entered the hospital October 5, 1930. Her chief complaint was pain in the chest and dyspnea. She was a small woman, poorly developed and poorly nourished. She was evidently quite ill, nervous and greatly concerned about her condition. She was despondent and discouraged for she had been treated by two or three doctors and yet continued to grow worse.

Her present illness began about six months before entering the hospital with a feeling of general weakness and dyspnea on slight exertion, which symptoms had progressed steadily to the time of coming in the hospital. She had noticed no edema, but there had been frequent attacks of palpitation of the heart. There was a slight cough at times, but no chills or night sweats. She continued ill and realized her condition was growing worse in spite of the treatment she had received. When I first saw her she anxiously questioned me as to whether I thought her condition could be benefited and pleaded with me pitifully to do all in my power for her.

For the four or five days previous she had suffered with a severe and constant substernal pain and pain in the right upper chest anteriorly. This latter pain radiated to the back in the region of the right shoulder blade. The severity of these pains had grown steadily worse for several days and for the first time during her illness she had several chills.

Concerning her past history, she had suffered typhoid, pneumonia, scarlet fever and measles. She had

been married seventeen years and her domestic relations were normal and happy. She had three children living and well. Three pregnancies ended in miscarriages, but she denied any knowledge as to venereal disease. In late years she had frequent attacks of sore throat, some of which had occurred during the several weeks prior to the onset of her present illness. No doubt these were attacks of true tonsillitis and more than likely the cause of the endocarditis. All of the lower teeth had been extracted because of pyorrhea and abscess formation. Her appetite had been extremely poor for several months and the bowels irregular and constipated. At infrequent intervals during this period (past six to seven months) she had been nauseated and had vomited, but there had never been any blood. She had never been jaundiced.

When admitted to the hospital her temperature was 99.2, pulse 98 and respirations 22. The tongue was coated except around the edge which was a deep red. All the lower teeth were out and the gums appeared in good condition. There were several gold crowns of the upper teeth. The remaining teeth were in poor condition, but there was no true pyorrhea. The tonsils were large and cryptic, and there was some inflammation of the entire throat.

The blood pressure readings were consistently low throughout her illness. The heart was decidedly enlarged as determined by palpation and percussion. At the apex a loud systolic murmur was heard which was transmitted to the region of the left axilla. In the aortic region one could detect a presystolic murmur, but it was not transmitted to any extent. The heart sounds were faint and roughened at all the valve areas. The pulse volume was fairly good and the arteries did not seem sclerotic. The lungs showed evidence of congestion. There was slight adenopathy of the cervical glands. The examination was otherwise negative.

Laboratory Findings.—Several urine examinations were negative except for a small amount of albumin. Red cells were 2,670,000 and hemoglobin 70 per cent. There were 10,700 white cells, 82 per cent polynuclears and 18 per cent small lymphocytes. X-ray of the chest confirmed the finding on physical examination of cardiac enlargement and also showed increased density in the left lower lobe probably resulting from emboli. On October 9th, four days after entering the hospital, blood culture was reported positive for streptococci. The Wassermann and other laboratory tests were negative. Another blood culture was reported positive for streptococci on October 20th.

This patient remained in the hospital fifty days but showed no improvement. The temperature curve and pulse rate were characteristic of septicemia. She became so despondent and homesick that her husband took her home against advice. My interest in the case was such that I asked and obtained permission to continue to treat her in the home. She left the hospital on November 23rd, continued to grow weaker and died on December 8, 1930. We succeeded in obtaining permission for a partial autopsy only.

Autopsy Report.—The thoracic cavity and a small section of one lung taken from the mid-portion showed nothing of special interest. The pericardial cavity contained about 100 cc. of straw-colored fluid. The visceral and parietal pericardium were smooth and soft and glistening. The heart was markedly enlarged and the musculature was soft and friable. On each of the valves there were minute vegetative deposits, but on the pulmonary valves and mitral valves were two fungating masses, each about 1 cm. in diameter. The most unusual and interesting finding in this heart was the greatly enlarged pulmonary trunk, containing as it did, just above the pulmonary valve, a vegetative deposit about 2.5 cm. in diameter. The liver was greatly enlarged as a result of passive congestion. We were allowed to take only a small section for microscopic examination. Unfortunately a complete autopsy was not allowed and therefore only a partial report can be given.

Anatomical Diagnosis—(Dr. J. Q. Cleveland)

- I.—Sub-acute endocarditis.
- II.—Myocarditis.
- III.—Hypertrophy and dilatation of the heart.
- IV.—Passive congestion of the liver.

Tissue Report Diagnosis—(Dr. R. S. Leadingham)

- I.—Edema of the lungs.
- II.—Fatty degeneration of the liver.
- III.—Toxic myocarditis.

EFFECT OF SMOKING ON CARBON MONOXIDE CONTENT OF BLOOD

H. B. Hanson and A. B. Hastings, Chicago (*Journal A. M. A.*, May 13, 1933), study of the carbon monoxide content of the blood of normal persons confirm Gettler and Mattice's conclusion that "smoking is apt to be the most conspicuous factor in determining the carboxyhemoglobin of an individual under normal conditions when he is not exposed to obvious high percentages of carbon monoxide." The authors observed that normal persons who do not use tobacco and who are not habitually exposed to automobile gases showed an average saturation of the blood with carbon monoxide of 1.5 per cent. Analyses made on the blood of subjects after smoking from ten to fifteen cigarettes showed saturation of the hemoglobin with carbon monoxide varying from 3.1 to 4.3 per cent. A single determination indicating a saturation of 6.7 per cent cannot be regarded as typical. One subject who smoked a pipe showed a comparable saturation of hemoglobin with carbon monoxide, 3.8 and 4.1 per cent, after ten pipe loads. A sample of blood analyzed in the morning, twelve hours after his last smoke, showed a decrease in saturation to 2 per cent. This was not significantly changed when the blood was analyzed six hours later without smoking in the intervening period. The authors encountered no symptoms attributable to the presence of carbon monoxide in the blood in their series.

COMMON DUCT OBSTRUCTION*

Report of Ten Cases

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The literature convinces us that it is increasingly difficult to make an exact diagnosis as to the cause of common duct obstruction. There is no typical picture since history, physical signs and laboratory so frequently clash with the operative diagnosis. The most common causes of common duct obstruction are stones in the common duct, strictures and tumors of the duct; and tumors, benign and malignant, of the pancreatic head. Although extremely rare, benign and malignant lesions of the duct may occur. Doctor Grove and I are reporting, from our private practice with one exception, ten cases of common duct obstruction illustrative of these common causes. They are divided as follows: common duct stone, 3 cases; stricture of the common duct, 2; obstruction at the head of the pancreas, 3 malignant, 2 benign.

If we classify jaundice under three types; namely, hemolytic, hepatic (infectious) and obstructive, our main problem from the surgical standpoint is the differential diagnosis between the obstructive and non-obstructive types. It can be approached from both the clinical and laboratory angles. Let us first consider it clinically.

Pain

It is encountered chiefly in the obstructive type. Walters¹ reported that in 86 per cent of the cases of obstruction at the Mayo Clinic the patient gave a history of biliary pain or colic. Weir and Partch found that, in a series of 175 operative cases seen at the Mayo Clinic, 50 per cent of the patients with cancer of the head of the pancreas and 50 per cent of the cases with stricture of the duct had had pain associated with jaundice. Charcot's syndrome with pain, fever, chills and intermittent jaundice is typical and needs no further comment. The cases without pain give more difficulty.

Jaundice

If the patient is young, it is usually of hepatic origin. If the patient is old, it is probably malignant; but chronic pancreatitis frequently simulates a malignant pancreas. Again the Charcot syndrome is typical of a ball-valve stone, while a steadily increasing, afebrile jaundice in the cancer age, associated

with loss of weight, usually means cancer of the head of the pancreas or of the extra-hepatic ducts. A febrile reaction of any extent with jaundice in a young patient usually denotes hepatic origin. In a recent paper embracing a study of 533 consecutive cases of jaundice at the Mayo Clinic, Eusterman² stated that the most common cause of jaundice was stone in the common duct; the most uncommon, primary carcinoma of the liver. The error in accurate diagnosis in the former was 6 per cent. Cholelithiasis was the second most common cause of jaundice and correct diagnoses were made in 67 per cent of the cases. The chief incorrect previous diagnosis was choledocholithiasis. A correct diagnosis of carcinoma of the pancreas was made in 92 per cent of the cases, but in the absence of jaundice the diagnosis was exceedingly difficult.

Gas and Nausea

Usually gas, nausea, flatulence and sour eructations are associated with jaundice, but they occur in both the obstructive and non-obstructive types. Lahey³ strongly advocates attempts at earlier diagnosis on these beginning symptoms of biliary disease before the late symptom of pain is manifested.

Palpable Gallbladder

This usually suggests malignancy of the pancreas, gallbladder or ducts, or else a benign obstruction of the cystic or common ducts. In 60 per cent of the cases of malignancy of the pancreas at the Mayo Clinic, the gallbladder was palpable. However, Walters⁴ case of a man 70 years of age, with a large stone in the gallbladder pressing on the cystic duct and Baehr and Klemperer's⁵ two cases which violated Courvoisier's law, convinces us that we cannot be dogmatic in our diagnosis of malignancy.

Clay-colored Stools and Bile in Urine

Usually clay stools are indicative of obstruction of the common duct, but so-called "asymptomatic" common duct stones do occur. Klingenstein⁶ reported "asymptomatic" common duct stones in patients with typical gall stone colic but with no clay stools, jaundice or bile in urine. In his series at Mt. Sinai, 6 per cent of 82 choledochotomies were asymptomatic. In comparison, Mayo-Robson reported 1 per cent; Jordan, of the Mayo Clinic, 13.2 per cent; Rossi, 10 per cent; Clute of the Lahey Clinic, 39 per cent.

Size and Consistency of the Liver

An enlarged, nodular liver indicates a metastatic malignancy while an enlarged, smooth liver supports the diagnosis of chronic hepatitis resulting from an obstructive or infectious jaundice.

*Read before the Fulton County Medical Association, Atlanta, Ga., February 16, 1933.

The laboratory is of valuable assistance in the diagnosis also. The icterus index, for example, not only confirms the presence of jaundice but gives us an accurate estimate of the extent of the jaundice. In a deeply jaundiced patient, the surgical risk is much greater, and especially is a rising icterus index of grave moment. The Van den Bergh reaction is of important differential diagnosis; the indirect reaction indicating the hemolytic type, the direct reaction the obstructive type. Likewise, an increase in the fragility of the red cells in a jaundiced patient is suggestive of hemolytic jaundice. The sedimentation and coagulation times are increased in jaundiced and warn us of the tendency of these patients to bleed. Lahey has recently suggested the insertion of a duodenal tube for 24 hours; and, at hourly intervals, extractions from the duodenum are examined for bile. If the obstruction is complete, no bile will be found in any of the specimens. Conversely, if bile is found in some or all of the specimens, one can conclude that obstruction is either intermittent or incomplete.

The trend in surgery in obstruction of the common duct at present is towards earlier diagnosis. The mortality in almost any series can be appreciably lowered if we can sharpen our diagnostic acumen in detecting the earlier symptoms. In suspected biliary disease, Lahey appeals for thorough investigation for such symptoms as gas, nausea and flatulence, rather than the later symptom of pain, indicative of stone. According to Crump's figures on one thousand autopsies performed in the Austrian Clinic of Erdheim, 32.5 per cent showed stones in the biliary tract, 7.8 per cent had stones in the common duct and 1 per cent in the common duct after cholecystectomy. This report alone should awaken us to the relative frequency of stones. The statement cannot be made that the frequency of gall stones is on the increase, but certain clinics are becoming more radical in their surgical attitude toward them. Lahey³ stated that "there are no harmless gall stones and an earnest attempt should be made to diagnose and operate on patients with gall stones earlier." He believes quite logically that the longer gall stones exist and the greater the number of attacks, the greater the incidence of common duct stones. Lahey has probably the most radical opinion at present regarding the exploration of the common duct. Prior to 1926, the common or hepatic duct was explored in 12 per cent of the biliary tract surgery, and stones were found in 8 per cent of the cases. Since 1926, he has been exploring 41 per cent of

the common ducts in patients giving a history of attacks of jaundice, and in 19 per cent stones were found. The mortality prior to 1926 was 5.4 per cent, since then 2.2 per cent. Of all the patients who had common duct stone operations, the mortality was 13.3 per cent. Clute⁸ reported 74 cases of common duct stones and concludes that the "common duct which is dilated and thickened should be opened and explored in every case, whether or not stones can be palpated and regardless of any history of jaundice." Erdman⁹ advocates exploration of the duct if there is a history of jaundice, if the duct is distended, or if stones are thought to be palpated. Furthermore, Judd¹⁰ stated that in over 600 cases at the Mayo Clinic, in which the common duct was explored and the gall-bladder removed, there had been no recurrence of common duct stones after twenty years.

Treatment

In no type of patient is the pre-operative preparation more important than in the deeply jaundiced case. Walters has shown that these patients die of post-operative hemorrhage and hepatic insufficiency, as demonstrated in case 4, where the patient died of typical liver insufficiency. The coagulation time must be lowered at all costs either by transfusion, high carbohydrate diet, or by Walters' treatment of 5-10 cc. of 10 per cent calcium chloride intravenously.

In most cases of stricture, the surgery is very unsatisfactory and the stricture is most likely to recur. In cases of stricture of the common duct, Walters and Lahey have shown the value of choledochoduodenostomy, and it is the logical procedure when practicable. Frequently, when the duct has been more seriously injured, the duct may, of necessity, be reconstructed over a tube. When neither of the above procedures is possible, Lahey suggested the transplantation of a temporary external biliary fistula into the duodenum; but his subsequent reports are that the results have been poor, since the tract restrictures in all cases. When no plastic operation is feasible, insertion of a T-tube, inviting an external biliary fistula, may be all that can be done. Walters has shown that, in severely jaundiced patients, it may be wise to do a two-stage operation, first inserting a T-tube or a catheter in the duct to decompress the liver slowly. This is done by alternating clamping and unclamping the drainage tube every thirty minutes. Later, when the patient's jaundice has subsided, a plastic operation on the duct is done. A sudden release of pressure in the biliary sys-

tem concomitant with the unclamped drainage tube is a frequent precursor of hepatic insufficiency. This proved very effectual in case 3.

The treatment of the malignant duct obstruction offers a real problem. There is no hope of cure; but even if a hopeless pancreatic malignancy is found, a palliative cholecystgastrostomy or duodenostomy as in cases 5, 6 and 7 will relieve the jaundice and subsequent intense itching. Further, the diagnosis may be in error. Baehr and Klemperer reported two cases, both of which violated Courvoisier's law; i. e., both had enlarged gallbladders and no malignancy. Walters reported a case of a man 70 years of age, with a large stone in the gallbladder pressing on the cystic duct, giving a typical picture of malignancy. He concludes that "abdominal operation should be considered in all cases of obstructive jaundice in which the general condition would seem to permit exploration at a reasonable risk." Cases 3 and 9, with evident chronic pancreatitis, demonstrated the frequent difficulty at operation of distinguishing between a malignant and benign growth of the pancreatic head. It is impossible before operation definitely to distinguish between carcinoma of the pancreatic head, chronic pancreatitis, and benign stricture of the duct of unknown origin. For the first, there is of course only temporary relief but no cure; for the latter two, there is relief and permanent cure. The patient, therefore, deserves the chance that operation may afford.

Although not directly related to our subject, we wish to call attention to the relation of cholecystitis and cardio-vascular disease. Judd¹¹ quotes Willius in stating that "55 per cent of cardio-vascular cases associated with cholecystitis are improved by cholecystectomy." Judd does not believe that the gallbladder acts as a true focus of infection; but the fact remains that in his experience the above group of cases are improved by cholecystectomy, as we, too, have seen on several occasions. We recently saw a case in consultation, which had definite symptoms of acute cholecystitis and positive electrocardiographic evidence of a coronary thrombosis. His condition never improved to the extent of advising surgery, but at autopsy acute and chronic cholecystitis with liathiasis was found in conjunction with a chronic myocarditis and coronary thrombosis.

Case Reports

All of these patients consulted us on account of severe jaundice.

Case 1. Mrs. J. H., age 47, entered complaining

of loss of forty pounds and pain in right side and shoulder of almost two years' duration, following cholecystectomy elsewhere. The common duct was exposed with difficulty, due to dense adhesions, but no stone was found. A partial stricture one-eighth of an inch long, at the junction of the hepatic and common ducts, was incised and drained by a T-tube. Drainage was profuse, the stools were clay-colored and the patient became dull and stuporous, until death on the fourteenth post-operative day.

Case 2. Mrs. J. G., age 68, entered complaining of jaundice after an operation several years before for a stone in the common duct and a subsequent stricture of the common duct. Her symptoms recurred eight months after the second operation, upon removal of the tube. Dense adhesions prevented the exposure of the common duct. There was evidence of hypertrophic cirrhosis. Normal convalescence ensued, but after a year the liver became markedly enlarged and she died a month later.

Case 3. Mr. T. D., age 55, entered complaining of general malaise and pain in right lower quadrant of twelve months' duration. His liver was 3 cm. down and the gallbladder was enlarged and tender. His icterus index was 30. The thick-walled, distended gallbladder contained clear bile and the head of the pancreas was moderately enlarged, suggesting inflammatory rather than malignant changes. A cholecystostomy was performed and the patient had a stormy convalescence until transfusion on the fourth day. Two and one-half weeks later, the gallbladder was anastomosed to the stomach, and the transfusion was repeated. His rapid recovery and his satisfactory condition ten months later point to chronic pancreatitis as cause for the obstructive jaundice.

Case 4. Mr. M. S., age 50, entered complaining of jaundice and fullness in the epigastrium of three weeks' duration. There was a firm mass in the right upper quadrant. X-ray showed an enlarged, mottled gallbladder, visualized poorly, and a shadow suggesting a stone at the junction of the cystic and common ducts. His icterus index was 90. The gallbladder was enlarged, with thin, watery bile in both the gallbladder and common duct. The common duct was dilated and the liver was small, with a shrunken capsule denoting chronic obstruction. There was a stricture at the ampulla of Vater. Cholecystostomy was performed. The liver was decompressed slowly by frequent clamping of the tube, and the patient drained thin, serous bile profusely but remained jaundiced. On the seventh day, a cholecystgastrostomy was performed and the patient transfused on the table, but he died fifteen hours later.

Case 5. Mrs. M. W., age 50 years, entered complaining of increasing jaundice of several weeks' duration and showed a firm mass in the epigastrium. The icterus index was 84. An enlarged gallbladder and a firm nodular fixed mass in the region of the pancreatic head were found. A cholecystgastrostomy was performed, to decompress the liver, but the patient declined until her death on the third day. An autopsy

confirmed a carcinoma of the pancreatic head with pressure on the common duct.

Case 6. Miss P. V., age 32, entered with a history of attacks of severe pain in right upper quadrant, gas, nausea, and vomiting for several months. There was tenderness and slight spasm in the right upper quadrant and epigastrium. A thickened, distended gallbladder with several stones was removed. The stump of the cystic duct was open so a probe was passed into the common duct, but no stones were found. The abdomen was drained and convalescence was uneventful, except for a sinus draining light bile. One month later, lipiodol injected into the sinus showed two stones in the common bile duct. At the second operation, the common duct was opened and one stone removed. The second stone was impacted at the ampulla of Vater and was removed by a trans-duodenal approach, pushing the stone back up the duct. The lower end of the common duct was strictured and would not admit a probe to the duodenum, therefore the common duct was anastomosed to the duodenum. The patient left the table rather severely shocked, a transfusion and repeated stimulation having been necessary. She died fourteen hours post-operative.

Case 7. Mr. A. D., age 74, entered complaining of malaise and loss of weight of ten weeks' duration. There was a mass in the right upper quadrant. A distended gallbladder and a hard nodular growth at the head of the pancreas pressing on the common duct was found. Cholecystostomy was performed since the fixation of the duodenum prevented a cholecystoduodenostomy. Convalescence was uneventful, but the patient rapidly lost ground after discharge, and died two months post-operative.

Case 8. Mr. J. E., age 48, entered complaining of pain in the epigastrium, indigestion, constipation and loss of weight, which he had noticed progressing for three months. A large, firm, infiltrating mass was found involving the head of the pancreas, pylorus, duodenum and posterior wall of the stomach, evidently primary in the pancreas. There was direct pressure on the common duct. A posterior gastro-enterostomy was performed with the hope of relieving the pyloric obstruction, but no procedure was feasible to relieve the obstructive jaundice. The patient died six weeks later.

Case 9. H. P., a 54-year-old negro, was admitted to Grady Hospital complaining of "buttermilk" diarrhoea, griping abdominal pain and persistent soreness in right lower quadrant of four weeks' duration. There was slight spasm over the right rectus with tenderness in the epigastrium on deep palpation, and a vague indefinite mass 2.5 cm. above and to the right of the umbilicus. The head of the pancreas was hard and enlarged, probably malignant, and the gallbladder firm and containing 50 cc. of thick bile. Cholecystgastrostomy was performed and the patient had a normal convalescence. Nine months post-operative, he reported no pain, constipation or discomfort; his appetite was good and he had gained weight. This suggested chronic pancreatitis instead of malignancy.

Case 10. Mr. T. J., age 52, entered complaining of severe pain in the right upper quadrant for one week. His pain was relieved by morphine, but recurred two days later, with dyspnoea and palpitation. His abdomen was distended, and there was slight tenderness in the right upper quadrant. Jaundice had been intense for several days. Blood pressure was 98/70 and the patient was almost in extremis when seen by us. An acute cholecystitis with three stones impacted in the cystic duct was found and a cholecystostomy was performed. Due to the patient's poor condition, the common duct was not explored for stones. His jaundice rapidly increased and he died thirty hours post-operative.

Conclusions

Although no conclusions can be deduced from so small a series of cases, these patients, with one exception, were above the age of 47 years. The youngest case was 32 years, the oldest 74 years, and the average age 53 years. The hospital mortality was 50 per cent, but when it is considered that all of these cases showed evidence of complete obstruction with four plus jaundice, and most of them in advanced years, the mortality compares favorably with other series. Our only hope for a reduced mortality in obstructed cases is in earlier diagnosis, especially in those due to stone. I quote freely from Doctor Lahey¹² in his discussion of Judd and Priestley's paper at New Orleans in 1932: "Our medical friends must overcome the complacency with which they permit patients to go through repeated attacks of gall stone colic. They must learn that if these patients are operated on while the stones are in the gallbladder, the mortality will be low and the end results will be much improved. They must learn that it is delay on their part or the patient's part, which makes the ultimate high mortality and bad results."

Summary

1. Ten cases of common duct obstruction are presented.
2. It is shown that the common duct is being more frequently explored for stones.
3. An appeal is made for earlier diagnosis of duct obstruction and for exploration of all cases of obstructive jaundice if the patient constitutes a reasonable operative risk.

Subsequent Note

Since these cases were reviewed, Case No. 3 has died. He returned in November, 1932, with clinical and x-ray evidence of duodenal obstruction for which a posterior gastro-enterostomy was done. The mass in the pancreas had greatly enlarged and had almost completely obstructed the second portion of the duodenum. Following operation, his obstructive symptoms were relieved

but he continued to decline, showed evidence of metastases, and died at home, January 12, 1933.

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DELAYED SECONDARY APPENDICEAL ABSCESS

Report of Case

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A rather careful search of available literature gives very little information regarding the time elapsing after an appendectomy before the appearance of a secondary abscess. It would seem that the consensus of opinion is that a secondary appendiceal abscess is much more apt to occur in those cases where the appendix has ruptured, and where peritonitis has followed. It would also seem that secondary abscess is more apt to develop in those cases which were drained.

Bancroft¹ reported 584 consecutive cases of acute appendicitis of which 133 developed abscess. The death rate of those developing secondary abscess was 3.7 per cent, as compared with 4.2 per cent of the entire series. He does not mention the time interval between the first and second operation.

Ochsner² says that intraperitoneal abscesses occurring postoperatively usually follow peritonitis and in that sense are truly residual. Bancroft¹ showed that these residual abscesses are not only found in undrained cases; his series showed abdominal abscesses in 1.6 per cent of the nondrained cases of appendicitis and in 6.2 per cent of the drained cases. Ochsner's compilation of reported cases shows that residual abscesses occur in from 1.8 to 5.7 per cent of all cases of acute appendicitis. He also states that such abscesses may occur months or even years after the primary infection. Martin³ reports a case of a young man, operated on at 7 years of age for acute appendicitis, who, at the age of 25, was found to have a circumscribed abscess and a foreign body which had remained for fifteen years, causing attacks of pain re-

ferred to the side and hip. It is probable that the cavity drained incompletely through the appendix. An x-ray plate showed the shadow of a pin in the right inguinal region beneath the old scar. The scar was incised and a small tract lined with granulations followed down. The pin was removed, and the cavity drained. The wound closed, but three times during the next three years, there was pain and tenderness in the region of the old scar, and the abscess was reopened each time. Finally, removal of sinus wall and appendix was followed by complete recovery.

In view of the scant information available concerning the time interval between the primary operation and the appearance of a secondary abscess it is believed the following case report is of interest.

Report of Case

A man of 59 years was first seen July 30, 1932. He had become ill in Birmingham, Ala., four days previously and had come to Atlanta for medical attention.

Family History: His father died of brain abscess. His mother died of old age. Two sisters and one brother are living and well. Family history otherwise negative.

Marital History: Married in 1901. Is divorced.

Past History: Born in New Jersey. Previous illness chicken pox, diphtheria, tonsillitis, malaria, and influenza. Has had no other diseases. Operations, appendectomy in 1912. At this operation, the appendix was found to have been ruptured and peritonitis present. The appendix was removed and the wound drained through a right rectus incision (3 drainage tubes) and through a stab wound in the right flank (1 drainage tube). The patient was confined to the hospital three months following this operation. Injuries, broken right arm during childhood.

Eyes: Has worn glasses for 27 years. No inflammation or discharge.

Head: Ears negative.

Nose: No obstruction, epistaxes or head colds. Has had hay fever every year in September for past 50 years.

Throat: Occasional sore throat. Often has tonsillitis.

Teeth: Has had false teeth since 1918.

Cardio-respiratory: Patient states that he has had heart trouble for about 25 years, but takes no treatment. He has had no evidence of decompensation. No complaint of pain in chest, cough, sputum, hemoptysis or night sweats.

Gastro-Intestinal: Appetite good. Eats general diet three times a day. Does not eat between meals. No nausea, vomiting, pain, gas distress or hematemesis. Bowels, regular, no diarrhoea, bloody, tarry or clay stools.

Genito-urinary: Negative.

Present Illness: On July 25, 1932, this patient

awoke with a fever and severe pain in his abdomen in the region of his old appendectomy incision. He said that the pain was of such a nature that he would have been sure he was suffering from an acute attack of appendicitis, had he not thought that his appendix had been removed in 1912. During the next four days the pain and fever continued and he recalled that he had suffered similar pain, but in a lesser degree, at various intervals for many years, the earliest definite date that he could recall being in 1920.

Physical Examination: A man 59 years old is lying in bed in no apparent discomfort, but very apprehensive as to the seriousness of his condition, so much so that he insisted on seeing the priest. His eyes, ears and nose are normal. His tongue is slightly coated. The anterior and posterior pillars of the fauces are congested and inflamed. The tonsils are hypertrophied and scarred. The lungs are normal. The apex of the heart is located in the fifth interspace four inches from the mid-sternal line. There is a systolic murmur over the mitral area with transmission toward the left axilla. The second pulmonic sound is slightly accentuated.

The abdomen is distended with gas and is very tender in the right lower quadrant, particularly over the old appendectomy incision. There is a hard indurated mass circumscribing this old incision.

The reflexes are normal.

The blood vessels show a moderate amount of arteriosclerosis in keeping with the age of the patient.

The blood pressure is 126/70.

A blood count made at this time shows 18,000 leucocytes, of which 85 per cent are polynuclear neutrophils and 15 per cent are small lymphocytes.

The urine shows a total acidity of 30 degrees specific gravity 1.005 and a trace of albumin. The microscopic examination shows a few leucocytes and epithelial cells and a few mucous shreds.

His temperature was 101 4/5, pulse 84, respiration 24.

A tentative diagnosis was made at this time of secondary appendiceal abscess. It was believed, however, that the abscess had not become sufficiently walled off to warrant drainage, and hot flaxseed poultices were ordered kept on his side constantly.

By August 3rd, it was believed that the abscess had become completely walled off and it was decided to operate, using a local anesthetic because of his heart condition.

Accordingly, an incision was made through the line of the old appendectomy scar which revealed a pus pocket in the peritoneum which had penetrated the abdominal wall and had almost eroded to the surface.

There were several relatively small connecting pockets which were opened up with the gloved fingers, and approximately 700 cc. of pus drained. Three Penrose drains were inserted and the wound dressed. Following the operation the temperature, pulse and respiration returned to approximately normal and he seemed to be considerably relieved. The head of his bed was elevated to promote drainage. The patient

continued to improve and the drainage became less daily. He was soon on a general diet and permitted to be propped up in bed if he chose.

On the night of August 9, 1932, he was found at 8:30, sitting up in bed having great difficulty in breathing, but he complained of no pain. His heart was dilated and both lungs were filled with bubbling rales. The pulse was so rapid that it could not be counted. He was given morphine grains $\frac{1}{4}$, and atropine grains 1/150, and digifoline 1 cc hypodermically. By 9:30, his pulse was 120, respiration 28, but he was developing cyanosis. He was given adrenalin chloride minimum III with good effect. At one o'clock on the morning of August 10th and again at 4:30 there was a recurrence of the dyspnoea with its concomitant symptoms which was relieved by the same treatment. But the patient was seized by a fourth attack a 10:00 A.M., which did not respond to treatment, and he died at 10:30 with an acutely dilated heart.

Comment

Herein is reported a case of secondary appendiceal abscess which appears to be rather unique in that the abscess did not become acute until twenty years following the appendectomy, although the history suggests that it had been definitely present for at least twelve years.

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DIABETES MORTALITY IN NEW YORK CITY DURING THE THIRTY-YEAR PERIOD 1901-1931

Godias J. Drolet, New York (*Journal A. M. A.*, March 11, 1933), states that in New York City, from 1901 to 1931, the recorded mortality from diabetes has risen from 503 to 1,921; or, from a crude rate of 14.2 per hundred thousand to 27.1, and from a standardized death rate of 17.3 to 27.9. Among females, diabetes mortality has increased more rapidly; the death rate, standardized, having been 16.3 in 1901 and 35.5 in 1931; whereas among males, adjusted similarly, it has changed only from 18.3 to 19.0. Among men past the age of 55, the diabetes death rate in New York City has, however, measurably increased; among women the rise begins earlier, namely, at 45 years of age; and their death rate has gone up markedly.

The National Society for the Prevention of Blindness, Inc., 450 Seventh Avenue, New York City, in its 25th anniversary report states that a growth of membership from ten public spirited men and women who organized the society a quarter of a century ago has been increased to 16,600 members throughout the United States. Its activities have been extended in collaboration with the medical profession, organized labor, social work, governmental agencies and other groups.

THE JOURNAL

OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

MAY, 1933

THE MACON SESSION

The eighty-fourth annual session of the association held in Macon, May 9-12, was one of the most successful and enjoyable in its entire history. More than five hundred members were registered and when to this number is added the members of the Woman's Auxiliary, the commercial exhibitors and visitors, there were nearly a thousand in attendance.

The Macon Medical Society and its Auxiliary through their entertainment committees left nothing undone for the comfort and happiness of their guests. The efficient general Chairman of the Entertainment Committee, Dr. Charles H. Richardson, directed all activities in a masterful manner. He was ably assisted by the chairmen and members of the many sub-committees.

President Marvin M. Head of Zebulon, presided over all the meetings in a most able manner. He was presented with the "Badge of Service" by Dr. Chas. E. Waits, Atlanta, on Wednesday evening on behalf of the Association. The members of the Association are grateful to Doctor Head for the progress made during his administration in spite of the trying times. Doctor Head's presidential address, "Organized Medicine," which appears as the leading article in this issue of the *Journal*, was timely, forceful and furnished much food for thought.

The House of Delegates met on Tuesday afternoon, Tuesday night and Friday morning. It transacted promptly and efficiently all matters coming before it. Every section of the state was well represented by the delegates elected by the component county societies.

Every member of the council was in attendance. Meetings were held daily and all matters referred to the Council were reported on promptly. It recommended, the House of Delegates approved and the Association voted a reduction of dues for the year 1934 to six dollars. It instituted still further economies in the conduct of the business of the Association and also a reduction of ten per cent in salaries.

The scientific meetings were unusually well attended, every paper on the program was presented on time. The discussions were freely participated in by many members.

Representatives from the Georgia Dental Association, the Georgia Pharmaceutical Association gave interesting talks and pledged their cooperation particularly in public health and preventative medicine.

The Abner Wellborn Calhoun Lecture was given by Dr. Merrill C. Sosman, Boston, whose subject was "Through the Alimentary Canal with the Fluoroscope." The honor guest of the Association, Dr. Oliver C. Wenger, Hot Springs, United States Public Health Service Reserve Clinic, spoke on "The Treatment of Syphilis."

The Crawford W. Long Memorial Prize medal for the best paper presented at the 1932 session was won by Dr. G. Lombard Kelly of Augusta, whose paper appears in this issue.

Dr. Roy R. Kracke of Emory University won the distinction of being first to have his name engraved on the Hardman Silver Loving Cup for the best original work done in 1932.

New officers elected were:

President-Elect—Dr. C. L. Ayers, Toccoa.

First Vice-President—Dr. J. D. Applewhite, Macon.

Second Vice-President—Dr. W. W. Turner, Nashville.

Councilors:

First District—Dr. C. Thompson, Millen.

Second District—Dr. J. A. Redfearn, Albany.

The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.

Third District—Dr. J. C. Patterson, Cuthbert.

Fourth District—Dr. Kenneth Hunt, Griffin.

Sixth District—Dr. H. G. Weaver, Macon. (Unexpired term)

President-Elect, Dr. Charles H. Richardson was inaugurated and the newly elected officers were installed. President Richardson appointed Dr. Grady N. Coker, Canton, Councilor for the Ninth District to fill the vacancy by the election of Dr. Ayers as President-Elect.

The Association accepted the invitation of the Richmond County Medical Society to hold its next annual session at Augusta, May 8-11, 1934.

NOMENCLATURE

Standardization has been called both the blessing and the curse of American civilization. A few years ago we were told that by reducing the number of models of electric light bulbs by something like 80 per cent, the cost of manufacture and of retailing would be so reduced that we could buy better bulbs for less money, and that we would all become prosperous. The first part of this promise about the standardization of electric bulbs has long since been fulfilled, and similar promises as to many other manufactured articles have also been carried out to the benefit of the public. On the other hand, certain members of the intelligentsia and many expatriate Americans have deplored our uniformity. We do all see the same movies, read the same papers, (recently) vote the Democratic ticket and we do even tend to think the same thoughts.

From a cultural point of view, perhaps much can be said both for and against standardization. From a scientific point of view there are only arguments in favor of standardization. Granting that a certain amount of art is fundamental for the successful practice of medicine, the more science that can be compounded with it the better. And it must be remembered that the study of accumulated experience is essentially science. Unless a physician makes careful record of his experience, the fruits of his knowledge, sometimes dearly bought, go with him to the grave. If he is to give the profession the benefit of what he has learned, he must employ precise terms that will be readily understood by physicians, not only in his native state, but also in New England and California; indeed they must be able to carry his meaning wherever the English language can be read.

Moreover, medical nomenclature is lugubriously encumbered with proper names. Does "Paget's disease" indicate to you recurrent abscess, cancer of the nipple or osteitis deformans? Does "Addison's disease" suggest pernicious anemia or tuberculosis of the adrenal cortex? What we too often speak of as "Graves' disease" the Germans term "Basedow's disease" and other nationals name for their own medical heroes; historically Parry seems entitled, if anyone is, to the honor. We all know what is meant by the "Stokes-Adams syndrome": Verbezius described it more than a century before Adams did, Morgagni preceded Adams by more than sixty years and Spens reported a case when Adams was one year old. Twenty years after the appearance of Adams' paper, Stokes horned in by emphasizing the syn-

drome. Medical nomenclature would be much simplified by dropping all proper names. We should certainly drop those attached to conditions that we now understand well enough to describe in brief scientific terms.

This need for uniform nomenclature has long been recognized. Many attempts to meet the need have been made in the past by various governmental and international agencies, as well as by the Massachusetts General Hospital and the Bellevue Hospital in this country, not to mention various insurance companies. None of these has proved entirely satisfactory. In 1928, the New York Academy of Medicine called a meeting of representatives of many leading medical societies and of the profession at large. The latter number included Henry Christian, Canby Robinson, Haven Emerson and others of that caliber. The purpose of this meeting was to devise a system of nomenclature that would be definite enough to meet the most exacting demands of the most highly trained specialist in any field, but simple enough to be used by the busy, conscientious general practitioner; one that would incorporate the good points of the existing systems, but that would fill out their omissions and otherwise profit by their shortcomings. The Commonwealth Fund, several medical societies and insurance companies undertook to finance the work. After four years of work, aided by the advice of many physicians, the original group, their assistants, successors and new collaborators have recently published "A Standard Classified Nomenclature of Disease." This has been adopted as official by twenty-two of the most important medical organizations and by a number of the best hospitals in the country, including Emory University Hospital and the Georgia Baptist. Probably other hospitals in Atlanta will have adopted it before you read this.

Uniform nomenclature is particularly desirable for a hospital. For example, let us suppose that a number of patients suffering with precisely the same condition are admitted. Dr. A. diagnoses "heart disease," Dr. B. "decompensated heart disease," Dr. C. "congestive heart failure," Dr. D. "myocardial insufficiency," Dr. E. "cardiac hypertrophy," Dr. F. "myocarditis," Dr. G. "rheumatic heart disease," Dr. H. "rheumatic pancarditis," Dr. I. "adherent pericardium," Dr. J. "chronic valvular disease," Dr. K. "mitral stenosis," Dr. L. "chronic rheumatic endocarditis," Dr. M. "auricular fibrillation,"—it is not necessary to finish the alphabet. No one can say that any of these doctors is incorrect in his diagnosis. But

pity the poor record clerk who has to index all of these charts! Pity even more the ambitious physician who wishes to make a study of all the cases of this type that have been admitted to this particular hospital.

"Inactive rheumatic heart disease" conveys the essential diagnosis. Once this is recognized and put down, the various refinements of diagnosis with a list of the prominent symptoms and signs may be added. To index these for the hospital files according to the new system, the diagnosis should be preceded by 410-196.0. The 4 indicates that the cardiovascular system is the seat of the disease, 1 localizes it in the heart, 0 indicates that the whole heart rather than a single part is involved. The hyphen separates the seat of the disease from the etiologic factor. The second 1 shows that the original etiologic factor was infectious, 9 that the exact nature of the infecting agent is not known, 6 that the infecting agent is that of rheumatic fever. The final 0 denotes that the infectious process is no longer active. The ideal method of indexing these cases would be to have two cards with the chart number; the first to go under 410 in the file devoted to regional classification, the second to go under 196 in the file devoted to etiologic classification.

The use of this system, however, is not as complicated as one might suppose, for it is not necessary to use the index numbers in one's personal files. It does require the purchase of the book in which the approved diagnoses are listed, but any one who can read, especially if he once study the book for twenty minutes, can quickly and easily get from it the exact term he needs.

It is really stimulating to use the book. It requires you to commit yourself as to the etiologic factor: to state what it is if known to you, to state that it is unknown to you or to state that it has not yet been discovered by medical science. The use of these precise terms will do much to eradicate sloppy expression—which is all too often evidence of sloppy thinking.

Finally, "A Standard Classified Nomenclature of Disease" should make a personal appeal to the physicians of Georgia on two counts. The American Urological Association entrusted the preparation of the important chapter on Disease of the Uro-Genital System to Dr. Montague L. Boyd, who has succeeded in bringing order out of chaos in this field. The chapter on Diseases of the Cardiovascular System has been lifted bodily (the "standard" index numbers being added) from the smaller work on Classification and Diagnosis of Heart Disease prepared by the

American Heart Association, of which the newly elected President is Dr. Stewart R. Roberts. L.M.B.

THE BLOOD PRESSURE IN FIVE HUNDRED PHYSICAL EXAMINATIONS*

R. L. CARTER, M.D.
Thomaston

This paper is not intended as a treatise on blood pressure, but represents the results obtained in routine examinations of apparently normal individuals from the laboring or middle class of people who make up the majority of our population. All of the examinations were made of people either employed or applicants for employment of the Martha Mills, a division of the B. F. Goodrich Tire & Rubber Company of Thomaston. The majority of the individuals were under 30 years of age and were almost equally divided between males and females. Their previous occupations had been varied, including practically all of the common occupations. However, a large per cent were textile workers. Each individual is given a physical examination prior to being employed, and it is from these records that this report is made. In making these examinations the individual has a rest period of at least 30 minutes before the examination and an effort is made to have him relaxed and at ease to overcome any nervousness that would interfere with the normal blood pressure reading. All examinations were made between the hours of one and three P. M. The person to be examined was seated and made comfortable and the blood pressure instrument, a standard Baumanometer with 5½-inch cuff, was applied to the arm on a level with the instrument and the auscultation method used in determining the blood pressure. Two readings were made and an average taken of these two. In the abnormal cases many were re-checked at a later examination, so that these figures would be reasonably accurate.

In this report 532 individuals are included, 254 males and 278 females. According to age they were divided as follows: 325 were between the ages of 20 and 30, 159 between 30 and 40, 37 between 40 and 50 and 5 were 50 or above. In this group 71 or 28 per cent of the males and 61 or 22 per cent of the females had abnormal blood pressure readings. Hypertension and hypotension are included. The normal blood pressure was considered to be between 80

*Read before the Sixth District Medical Society, Indian Springs, Ga., June 29, 1932.

and 100 mm. of hg. as the diastolic pressure and between 120 and 140 systolic. Between the ages of 20 and 30, 49 or 15 per cent of the 325 persons had abnormal blood pressure readings. The blood pressure was abnormal in 44 or 28 per cent of those between 30 and 40 years of age and in 23 or 62 per cent of those between the ages of 40 and 50. The highest systolic pressure noted was 260 mm. of hg. while the highest diastolic was 140. In 59 individuals the diastolic pressure was 100 mm. hg. or above, these constituted approximately 50 per cent of all the cases of hypertension. These were considered as true cases of hypertension as various authors agree that essential hypertension does not occur without a corresponding rise in the diastolic as well as the systolic blood pressure. There was evidence of cardiac involvement in 35 of the individuals who had hypertension. In the majority of cases this consisted of cardiac hypertrophy; however, systolic murmurs were present in 6 cases and in 6 cases thyroid disease was present. A study of the pulse in the hypertensive cases showed the pulse rate to be 90 or more per minute in 46 cases. In the group with abnormal blood pressure 12, or 10 per cent, were overweight and 20, or 17 per cent, were underweight. This corresponds very closely with recent examinations of U. S. Army Officers of the southeastern district. Of the total of abnormal pressures noted in my series of cases 26 were found to be suffering from a hypotension of 110 mm. hg. systolic or less and from 50 to 70 diastolic.

It was characteristic that few of these individuals examined complained of any symptoms before examination. A great many who had a dangerous hypertension were unaware of their condition and were surprised to learn of their disease. It was not the purpose of these examinations to suggest any treatment, and all who needed treatment were referred to their family physician. However, a number of them came to me for advice, and I will give a brief outline of the treatment these patients received. The first essential in treating hypertension is the proper rest and relaxation, next is the diet, and third are drugs. I find that a rest of as much as two hours per day in the more severe cases of hypertension is very beneficial. In the most severe types of hypertension I find it necessary to leave off all work and have the patient remain in bed for one or two weeks and then gradually resume his occupation with periods of rest as the symptoms indicate. This usually requires three months. This alone reduces the pressure very satisfactorily in certain types of mild hypertension with no serious heart involvement. Of course, all foci of infection are removed. The diet should be sufficient to maintain vitality and vigor, and it is not advisable to reduce the

overweight individual at the expense of his strength and general health but rather to encourage a slow reduction by curtailing fattening foods. In the underweight individuals an effort was made to supply a diet sufficient to maintain a metabolism slightly above normal. Tobacco and alcohol were limited. The drugs that were used consisted chiefly of phenobarbital or sodium bromide and chloral hydrate. The drugs having a vasodilating effect such as sodium sulphocyanate were used in some cases satisfactorily. Sedatives and vasodilators are often combined with good results. In the mild cases of hypertension this routine has been found very satisfactory producing a fall in blood pressure in a few weeks to within reasonable bounds. In those cases who had definite heart involvement I did not hesitate to give digitalis in sufficient doses to produce results when indicated. It is essential that you keep your patient's confidence and impress upon him the necessity of following his routine carefully and have him report for examination at regular intervals. In this way lives may be prolonged for years and the patient made self-supporting rather than an invalid.

Summary

This study would seem to indicate that a larger number of the middle class people are suffering from hypertension than is commonly thought.

The average individual is not aware of his condition and does not report for examination or treatment until irreparable damage has been done.

Many of these people can be made useful and productive citizens by regular physical examinations and treatment consisting mainly of proper rest, adequate diet, the removal of foci of infection, and drugs which tend to relax and lower abnormal blood pressure.

PROTEIN NITROGEN AND NONPROTEIN NITROGEN DETERMINATIONS ON GASTRIC JUICE

Lay Martin, Baltimore (*Journal A. M. A.*, May 13, 1933), states that, in the normal gastric juice, protein nitrogen and nonprotein nitrogen fractions (amino acid, urea, uric acid and ammonia) were found in amounts that varied within but small limits. In cases of benign achlorhydria the amounts were found to be increased approximately twofold. In the cases of pernicious anemia the same increase was found and associated with still greater amounts of amino acid and urea. In cases of carcinoma of the stomach associated with achlorhydria, large amounts of protein and non-protein nitrogen were found.

WOMAN'S AUXILIARY

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CENTURY OF PROGRESS FAIR

The gift of space in the Hall of Science at the Century of Progress Fair in Chicago, has been supplemented in a letter from our 4th Vice-President, Mrs. Rollo Packard, resident in Chicago. "Our headquarters will be indicated by an ample poster as follows:

CENTURY OF PROGRESS
 Woman's Auxiliary
 to the
 Chicago Medical Society
Affiliations
 Woman's Auxiliary
 to the
 Illinois State Medical Society
 and
 Woman's Auxiliary
 to the
 American Medical Association
Information and Registration
 for
Visiting Wives of Physicians

Mrs. Packard extends the cordial invitation to all state Auxiliaries to place with this bureau any circulars, programs or yearbooks whose general distribution to Auxiliary members or other wives of physicians from other states is desirable.

Our congratulations surely go to the Chicago Auxiliary women who secured this hostess space at the fair, and they go equally to the national and all the state Auxiliaries who will be the beneficiaries of the arrangement. It should be a great channel for disseminating Auxiliary information and promoting acquaintance.

You were promised last month that further lures would be forth-coming in this news letter to entice you to Milwaukee.

For Auxiliary women and all other wives of physicians, here is the preliminary program of the convention itself followed by such an invitation as will warm your heart, fire your imagination and, we hope, crystallize your determination to join the forces gathering at Milwaukee, June 12-16, 1933.

WOMAN'S AUXILIARY
 TO THE
 AMERICAN MEDICAL ASSOCIATION
 Eleventh Annual Meeting
 Milwaukee

June 12-16, 1933
Headquarters: Hotel Pfister, Milwaukee, Wis.
Preliminary Program

MONDAY, JUNE 12, 1933

12:30 P.M.—Luncheon at College Woman's Club in Honor of Past Presidents, followed by National Board Meeting and visit to American Medical Association Exhibits at Auditorium. Tickets \$1.00.

7:00 P.M.—Dinner for National Board, Delegates, and wives of Officers and Delegates of the American Medical Association at Woman's Club of Wis-

consin. Musical program furnished by Artist Members of Auxiliary to Medical Society of Milwaukee County. Tickets \$1.25.

TUESDAY, JUNE 13, 1933

9:00 A.M.—General Meeting. Roof Room, Hotel Pfister. Mrs. James Percy presiding.

12:30 P.M.—Luncheon and Bridge at the Wisconsin Club. Tickets \$1.25.

2:00 P.M.—*Attractions available for those not wishing to play bridge are Layton Art Gallery, Milwaukee Art Institute, Milwaukee Museum, Curative Work Shop and Vocational School, or
 *Bus trip to county institutions, Milwaukee Children's Hospital Convalescent Home, and Washington Park Zoo.

8:00 P.M.—General Meeting of American Medical Association.

10:00 P.M.—Informal Dance at Wisconsin Club. Courtesy of State Medical Society of Wisconsin. Hostesses: Woman's Auxiliary to the State Medical Society of Wisconsin.

WEDNESDAY, JUNE 14, 1933

9:00 A.M.—General Meeting. Roof Room, Hotel Pfister. Mrs. James Percy presiding.

12:30 P.M.—Auxiliary Luncheon. Fern Room, Hotel Pfister. Toastmistress—?
 Guests and Speakers from the American Medical Association. Musical Program. Tickets \$1.00.

4:00 P.M.—*Teas in Private Residences.

8:30 P.M.—Light Opera. Tickets \$1.00.

THURSDAY, JUNE 15, 1933

9:00 A.M.—General Meeting. Roof Room, Hotel Pfister. Mrs. James Blake presiding.

12:30 P.M.—Buffer Luncheon. Crystal Room, Hotel Pfister. Tickets 75c.

—or—

12:00 Noon—Trip to Oconomowoc Lake District. Luncheon 12:30 P.M., Carnation Milk Plant, Oconomowoc, Wisconsin. Transportation and Luncheon Courtesy of Carnation Milk Company.

2:00 P.M.—*Sight seeing tour of Milwaukee.

6:30 P.M.—"Bring Your Husband" Dinner. Fern Room, Hotel Pfister. International-House-Cabaret. Tickets \$1.50.

9:00 P.M.—President's Reception and Ball. Schroeder Hotel. Hosts: The American Medical Association.

FRIDAY, JUNE 16, 1933

10:00 A.M.—Golf Tournament.

All trips start from Hotel Pfister.

*Bus transportation to be paid by individuals.

MRS. ROCK SLEYSER, *General Chairman*.

MRS. WILLIAM LIEFERT, *Chm. Hotel Com.*

4103 North Murray Avenue,
 Milwaukee, Wisconsin.

All women attending this convention, whether Auxiliary members or not, are invited to participate in this entire program.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

IS HOOKWORM STILL A PUBLIC HEALTH PROBLEM IN GEORGIA?

The thirteenth annual report of the International Health Division of the Rockefeller Foundation for the year 1926 announced to the scientific world that "Hookworm disease has almost disappeared from the United States." This statement readily found its way into newspaper channels and into prominent educational and scientific journals. The result was that the proclamation became a fact in the minds of the general public.

However, a review of the results of survey made in forty representative counties in Georgia during the past three years shows to the contrary that hookworm infection is still an important public health problem, though not so serious as it once was. This survey involved the collection and examination of more than 41,000 specimens. These specimens were collected from children chiefly of school age by health officers, physicians and nurses. The examinations were made at the State Board of Health laboratories. The map on this page shows the state as roughly divided into four areas, with the percentage of specimens positive for hookworm for each area inserted. The density of shading is in accordance with the relative intensity of infection. Thus it is seen that in the flat coastal plain section which includes south, central and southeastern part of the state, the incidence of hookworm infection is still high, averaging 38.7 per cent. The intensity is somewhat less in southwest Georgia, averaging 30.6 per cent. The old Piedmont plateau which includes the greater part of north Georgia shows a very light incidence, averaging only 4.8 per cent. This great variation between 38.7 per cent in the south-east and 4.8 per cent in the Piedmont section is not due to any appreciable difference in the mode of living or in hygienic or economic factors, but to the marked difference in humidity, topography and in the character of the soils. The Piedmont Plateau is made up of rolling, well drained hills, the surface soil of which is composed largely of non-porous clay. Such a combination is not favorable to the hatching and development of hookworm larvae.

The coastal plain of southeast Georgia on the other hand is flat or only very gently rolling and the soil is very light and porous, containing much sand. Such a soil

is ideal for the hatching and development of hookworm larvae.

But why is it that along the northern border of the state, particularly in the mountainous sections of northeast Georgia hookworm shows a much higher incidence than in the Piedmont section? The data at hand is perhaps too incomplete to answer this question. It may be, however, that the valleys separating the mountains of this section being covered with rich, somewhat sandy, loam are more suited for the development of larvae than the rolling red clay surface of the Piedmont belt. Also the humidity and rain fall in this section are much greater than on the Piedmont plateau.

It is true, nevertheless, that according to our recent survey an average of 17.1 per cent positive specimens were obtained in counties along the northern border of the state.

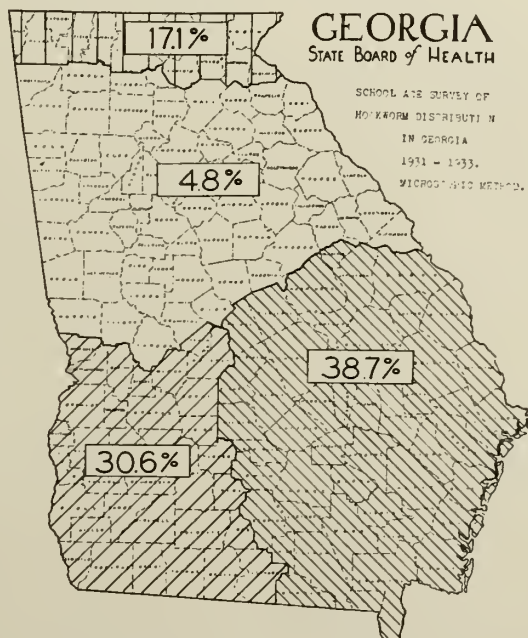


Table No. 1 shows in detail the data obtained from each of the forty counties comprising this survey. The highest incidence found in any one county was 82.3 per cent of a total of 293 specimens examined. The lowest was 0.0 per cent of a total of 168 specimens.

The mean positive finding for the entire state in the present survey was 30.5 per cent of a total of 41,894 specimens from forty counties. A similar survey made in 1913, twenty years ago, showed a mean positive finding of 78 per cent of a total of 13,057

specimens from children of school age in 31 counties. Assuming all other factors involved in both surveys to be equal, it appears that the incidence of hookworm infestation has decreased from 78 per cent in 1913 to 30.6 per cent in 1933. This is undoubtedly an improvement.

by mathematic formulae. Certain authorities claim that at least 50 worms are required to produce symptoms in a given case. Certainly hookworm disease has greatly decreased to the extent that the classic clinical case so common twenty or thirty years ago is now a rarity. Also while even ten years

TABLE I. SPECIMENS EXAMINED AND POSITIVE FINDINGS BY COUNTIES
INTESTINAL WORMS IN CHILDREN OF SCHOOL AGE IN GEORGIA, 1933

GROUP A.	County	Total Specimens	Positive Hookworm	Percent Positive	Positive Round worm	Dwarf Tape Worm	Pin Worm	Whip Worm
Extreme North Georgia.	Rabun	1763	278	15.8	240	19	13	8
	Union	60	11	18.3	9	0	0	0
	Whitfield	106	11	10.4	1	2	2	0
	White	978	235	24.0	111	36	14	0
	Stephens	50	5	10.0	0	0	1	0
	Walker	209	3	1.4	9	22	1	5
	TOTAL	3166	543	17.1	370	79	31	13
GROUP B. Piedmont Plateau.	Fulton	564	73	12.9	2	11	2	1
	Elbert	168	0	0.0	1	10	4	1
	Forsyth	1653	96	5.9	14	66	8	0
	Jasper	289	2	0.07	0	0	0	0
	Walton	2170	32	1.5	7	91	11	2
	TOTAL	4826	233	4.8	24	178	25	4
GROUP C. Southwest Georgia.	Mitchell	1823	658	30.6	1	35	10	2
	Calhoun	113	30	26.5	0	1	0	1
	Peach	235	60	25.5	0	3	0	0
	Clay	68	21	30.9	0	3	0	0
	Tift	3178	992	31.2	7	51	10	4
	Colquitt	208	68	32.8	0	5	2	0
	Macon	274	134	47.4	1	3	2	0
	Brooks	2197	940	42.8	25	15	9	3
	Cook	54	21	40.0	0	0	0	0
	Muscogee	704	104	14.8	0	12	4	2
	Dougherty	104	34	32.7	0	0	0	0
	Terrell	971	117	12.0	1	4	1	4
	Randolph	1000	262	26.2	1	11	0	2
	Quitman	1275	275	20.8	11	3	0	0
	TOTAL	12150	3713	30.6	47	146	38	17
GROUP D. Southeast Georgia Plain	Screven	1367	559	40.9	2	4	3	1
	Dodge	6330	1967	31.1	4	42	11	2
	Bryan	94	37	39.4	1	0	1	0
	Toombs	4381	1779	40.6	0	40	2	3
	Liberty	220	79	35.9	1	0	2	1
	Bulloch	1337	626	46.8	3	6	9	2
	Jenkins	977	325	32.2	1	11	4	1
	Wilkinson	94	50	53.2	0	3	0	0
	Washington	222	36	16.2	0	0	1	0
	Burke	61	32	52.5	0	0	0	0
	Telfair	5072	2039	40.1	2	30	10	4
	Clinch	197	86	43.6	0	0	0	0
	Brantley	293	241	82.3	2	0	0	0
	Camden	1107	426	38.4	121	4	8	17
	TOTAL	21752	8282	38.7	137	138	51	31
	GRAND TOTAL	41892	12771	30.2	578	541	145	65

(Mean %)

The figures presented above pertain to total infestations, without regard to the degree of infestation in each case. The number of worms necessary in a child to produce symptomatic evidence of disease cannot be fixed

ago it was a daily occurrence to find one or more specimens showing scores of ova to each microscopic field, it is now difficult to find a specimen showing more than five to ten ova per field.

Undoubtedly, educational propaganda through the media of schools, health departments and physicians has elevated the intelligence level of the public during the past few years with very gratifying results. Not only has the incidence of hookworm infestation greatly diminished, but severe hookworm disease in terms of the dirt eating, pasty-faced, puffed eyed, pot bellied, mentally and physically retarded dwarf is a rarity.

It must be remembered, however, that while the evidence of gross symptoms has greatly lessened, there are thousands of children in Georgia who are harboring a few worms. These children are anemic and underweight as a rule. Hence they are more liable to be susceptible to other diseases. In a sense they have a mild form of hookworm disease which may not be reflected in specific signs and symptoms, but which is very evident when compared with groups of children similarly situated but who have been treated with carbon tetrachloridechenopodium mixture.

While the hookworm problem in Georgia and throughout the South has greatly improved, it is hardly fair to the children of our state to say that it is no longer of public health importance.

Dr. C. W. Stiles who is credited with the discovery and naming of *necator americana* in this country has recently summarized the hookworm situation very aptly:

1. The extreme case known as the "dirt eater" is much more rare now than from 1902 to 1910. (I have seen less than fifty in the past two years.)

2. In general, the cases are much lighter than when the work first began in 1902.

3. The disease has been reduced both in intensity and somewhat in extent, but

4. The job has not been completed. The fundamental problem in hookworm control is not a question of bookkeeping or microscopic examinations, but requires a change in the daily habits of hundreds of thousands of rural whites, Indians and Negroes.

DOUBLE AND TRIPLE INFESTATION

Double infestations were found in 371 specimens, or 0.9 per cent. Triple infestations were found in 16 specimens, or 0.04 per cent.

Hookworm and round worm.....	162
Hookworm and dwarf tape worm.....	137
Hookworm and pin worm.....	24
Hookworm and whip worm.....	14
Hookworm and rat tape worm.....	2
Round worm and dwarf tape worm.....	5
Round worm and pin worm.....	8
Round worm and whip worm.....	16
Dwarf tape worm and pin worm.....	2
Dwarf tape worm and whip worm.....	1

Total..... 371

Hookworm, round worm and dwarf tape worm.....	8
Hookworm, round worm and pin worm.....	6
Hookworm, round worm and whip worm.....	2

Total..... 16

Two infestations with *Hymenolepis diminuta*, or rat tape worm were found. Both cases occurred in combination with hookworm. This is thought to be an exceedingly rare parasite in man, but several cases are encountered each year in Georgia.

Ascaris, lumbricoides, or round worm is rather unevenly distributed in the state. An intense focus has been found in the mountainous section of northeast Georgia and another of slightly lesser intensity in the extreme southeastern corner of the state.

Hymenolepis nana, or dwarf tape worm is rather uniformly distributed throughout the state, but is perhaps more commonly found in the northern half of the state.

Oxyuris vermicularis, or pin worm and *trichuris trichiura*, or whip worm probably occur much more commonly than found in this study. The eggs of these worms, and especially those of the pin worm, do not occur regularly in the feces and the usual technique of stool examination suitable for hookworm and round worm demonstration may fail to detect them.

Reference—Science Mar. 3, 1933, Vol. 77, p. 239.

THE CAVITY IN THE TUBERCULOUS: ITS MANAGEMENT

Edgar Mayer, Saranac Lake, N. Y. (*Journal A. M. A.*, May 13, 1933), points out that dangers of pulmonary cavities, namely, hemorrhage, aspiration, spread by extension and visceral degeneration, compel measures of therapy that cause their complete closure and a negative sputum. One ounce or more, daily, of mucopurulent sputum with a repeated high "Gaffky" count is presumptive evidence of a cavity. It is more definitely so when accompanied by elastic fibers or a septic blood count, not caused by complications. Young cavities, usually silent, are not detectable by physical signs. Serial roentgenograms are essential. Extremes of young and old cavities are often recognizable through serial roentgenograms and clinical studies. Strict clinical and roentgen studies are indicated in the early weeks. Timely intervention is essential. Pleural adhesions and rigid cavities may often be forestalled, and so selective collapse is more frequently possible. The extent and nature of the pathologic changes of pulmonary tuberculosis that surround and accompany the cavity influence the prognosis more than the cavity itself. Young cavities of medium size surrounded by little disease disappear in 50 per cent or more of patients on strict bed rest (except, perhaps, in childhood and adolescence). Likewise, cavities without classification of age can heal in 40 per cent of patients under more prolonged bed rest. The age of the patient, the age, size and number of cavities, the location, the drainage, the pleural adhesions and the fixation of the mediastinum and diaphragm have an important bearing on the outlook. Sixty-five per cent of patients with cavities are still living at the end of five years. Old upper lobe cavities with good drainage, especially in elderly patients, are consistent with prolonged life. The more favored sites of cavity formation are also the more common sites of bandlike and stringlike pleural adhesions.

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Headquarters

131 Forrest Avenue, N. E., Atlanta.

THE LARGE VS. THE SMALL SCHOOL OF NURSING

Over and over it is being said that medical and nursing service problems are intertwined with the economic problems of the present period. That there is no answer to the riddle of these professional problems without a corresponding answer to the existing fundamental economic problems, including those of supply and demand, of employment and unemployment.

With all of this the large and the small school of nursing is perhaps equally concerned in the final analysis, though from different angles. Statistics have proven beyond the shadow of a doubt that there are too many nursing schools in this country graduating too many thousands of nurses annually; that unemployment among nurses is critical.

Obviously the large school is mostly concerned with this overproduction of nursing service. Quoting from the second report of the Committee on the Grading of Nursing Schools, of which Dr. William Darrach is chairman, and May Ayres Burgess, Ph.D., is director, "if one fourth of all the nursing schools in this country could by some miracle of enforced legislation be closed, 52 per cent of all the students would be eliminated; but if this one-fourth included only the small schools, only 8 per cent of the students would be eliminated." Thus proving that the small school is not the real offender in the overproduction of nursing service.

On the other hand, the small school stands accused of inability to maintain pedagogic standards. While it is known that many small schools graduate efficient nurses, and likewise large hospitals have such large numbers of patients that the nurses do not have time to practice the real art and science of nursing in their daily rounds, it is recognized that the school connected with the small hospital is seriously handicapped in providing all the essentials of nursing education.

"If the small hospital is to provide ade-

quate clinical facilities for teaching student nurses, it must be at great pains and considerable expense, first, to make the best possible educational use of every nursing problem within its own walls; and, second, to provide ample and carefully controlled educational opportunities for its students through affiliation with other institutions. This means that most small hospitals must either conduct poor schools or must spend disproportionately large sums in order to conduct good ones," says the Grading Committee, which avers that the problem is not confined to the small school, but includes special institutions such as tuberculosis and mental hospitals which, even when they have hundreds of patients, necessarily do not have a sufficient number of the necessary types to justify a school. "*No matter what the size of the hospital, if it is unable to provide adequate numbers of patients, of all the different types necessary for the education of its students, it is faced with one of three alternatives—to conduct a poor school, to spend more money so that it can provide the experience which its students lack, or to close the school and care for its patients with maids and graduate nurses.*"

Continuing, the Committee's report gives as one of the reasons for the excess number of nursing schools that most hospitals have believed it was cheaper to carry their nursing service with students than to employ unskilled labor and graduate nurses. Attention is called in the report to the changes in wage and salary levels in professional as well as unskilled labor fields; and to the fact that partly because of this general salary reduction and partly because there are now so many graduate nurses available, well qualified graduates are increasingly willing to do bedside nursing in hospitals.

At once it is apparent that in very many instances it is uneconomic and impractical for hospitals to continue schools of nursing, which are expensive institutions fraught with

responsibility. This applies both to large and small schools.

Because the large school graduates a proportionately large number of nurses, it is the center of attack for reduction of student personnel; while the small school must stand the spotlight of scrutiny regarding its ability to furnish nursing education which will fit its graduates to meet nursing needs, to meet requirements for registration including reciprocity in other states in which the nurse may wish to engage in the profession of nursing, as well as requirements for Civil Service in connection with governmental positions, for enrollment in the nursing service of the American Red Cross, etc.

The Grading Committee's report shows that the average hospital in Georgia conducting a school has a daily average much below the average for the whole country. For these reasons, the Board of Examiners of Nurses has found it necessary to increase minimum standards as to experience as follows:

Nurses graduating after September 30, 1936, shall present evidence of graduation from a school of nursing connected with a hospital whose daily average is 50 or more patients, or the equivalent thereof.

Hospitals maintaining schools of nursing whose daily average is less than 50 patients may secure affiliations of from six months to one year's duration (equivalent to meet Red Cross enrollment requirements).

If the daily average is from 35-49, 6 months' affiliation.

If the daily average is from 20-34, 9 months' affiliation.

If the daily average is below 20 patients daily, one year of affiliation shall be secured. Such affiliations may be secured in the second or third year of training—that is, in 1934, 1935, or 1935-36. These requirements were voted by the Board of Examiners of Nurses for Georgia March 3, 1933.

NEW COUNCILOR DISTRICTS*

The counties in the new Councilor Districts of the state are as follows:

First District

Bryan	Emanuel	Montgomery
Bulloch	Evans	Screven
Burke	Jenkins	Tattnall
Candler	Liberty	Toombs
Chatham	Long	Treutlen
Effingham	McIntosh	Wheeler

Second District

Baker	Dougherty	Seminole
Brooks	Early	Thomas
Calhoun	Grady	Tift
Colquitt	Miller	Worth
Decatur	Mitchell	

Ben Hill
Chattahoochee
Clay
Crisp
Dodge
Dooly
Harris
Houston

Butts
Carroll
Clayton
Coweta
Fayette

DeKalb

Baldwin
Bibb
Bleckley
Crawford
Glascok
Hancock

Bartow
Catoosa
Chattooga
Cobb
Dade

Appling
Atkinson
Bacon
Berrien
Brantley
Camden
Charlton

Banks
Barrow
Cherokee
Dawson
Fannin
Forsyth

Clarke
Columbia
Elbert
Franklin
Greene
Hart

Third District

Lee	Schley
Macon	Stewart
Marion	Sumter
Muscogee	Taylor
Peach	Terrell
Pulaski	Turner
Quitman	Webster
Randolph	Wilcox

Fourth District

Heard	Pike
Henry	Spalding
Lamar	Talbot
Meriwether	Troup
Newton	Upson

Fifth District

Fulton	Rockdale
--------	----------

Sixth District

Jasper	Putnam
Jefferson	Twiggs
Johnson	Washington
Jones	Wilkinson
Laurens	
Monroe	

Seventh District

Douglas	Paulding
Floyd	Polk
Gordon	Walker
Haralson	Whitfield
Murray	

Eighth District

Clinch	Lanier
Coffee	Lowndes
Cook	Pierce
Echols	Telfair
Glynn	Ware
Irwin	Wayne
Jeff Davis	

Ninth District

Gilmer	Pickens
Gwinnett	Rabun
Habersham	Stephens
Hall	Towns
Jackson	Union
Lumpkin	White

Tenth District

Lincoln	Richmond
Madison	Taliaferro
McDuffie	Walton
Morgan	Warren
Oconee	Wilkes
Oglethorpe	

*The new Councilor Districts are composed of the same counties as the congressional districts of Georgia.

BOOK REVIEWS AND ABSTRACTS.

BOOK REVIEWS

The Heart Rate, by Ernest P. Boas, M.D., Associate Physician, Mt. Sinai Hospital, New York City, and Ernest F. Goldschmidt, Ph.D., Research Fellow (1930-31) Department of Surgery, Yale University School of Medicine. Price \$3.50. Pp. 166. Springfield, Ill.: Charles C. Thomas, 1932.

This book begins with the description of the "cardiotachometer". By means of this ingenious contraption, the subject can engage in his normal pursuits within a radius of 100 feet for hours or days at a time, while his pulse is being counted by an observer in another room. A number of persons of various ages, male and female, normal and diseased, were examined in this way, and records were also taken during seventy-seven operations of divers types. The contribution to the basic physiology of the heart rate is enormous, and it throws a great deal of light on certain aspects of clinical medicine.

Perhaps the most interesting paragraph is that dealing with the extraordinary increase in pulse during coitus on the part of both the man and the woman. It has been repeatedly observed in patients coming to the Grady Hospital with severe heart failure that they may be released in fair condition only to return a few days later worse off than on the former admission as a result of sexual intercourse. This scientific investigation explains why.

Another matter of clinical interest is that a sure means of diagnosing a functional tachycardia is to observe the slowing of the heart during sleep to a normal rate. This does not occur in case of heart disease, goiter and such like.

Our hats are off to this publisher for risking his good money in making such a handsome presentation of a book that is not likely to make a wide popular appeal.

L. M. B.

Clinical Diagnosis: Physical and Differential. By Neuton S. Stern, A.B., M.D., Associate Professor of Medicine, University of Tennessee School of Medicine. Price \$3.50. Pp. 364. New York: The Macmillan Company, 1933.

This book was picked up with no particular sensation of enthusiasm. What little there was was almost quenched by the lack of photographs. However, interest in the University of Tennessee and confidence in the publishers inspired more careful inspection, and this aroused admiration for the author's innovations and for his skill in presentation. He believes that the minutiae of abnormal physical signs can best be learned by actual demonstration on the patient, so he does not devote endless pages to their description.

The book is prepared to be used as a text for medical students. With an interested instructor it should serve this purpose admirably, but it is worth

more than this. The greater part is devoted to differential diagnosis, and consulting it should keep almost any physician from grave diagnostic errors. The reviewer learned a number of new things, not to speak of many that he had forgotten. It should prove particularly valuable to the man who graduated some years ago and who cannot afford the expensive systems that mark the advances of scientific knowledge.

L. M. B.

Practical Obstetrics. By P. Brooke Bland, M.D., Professor of Obstetrics Jefferson Medical College, Chief Obstetrician Jefferson Medical College Hospital, Philadelphia, Pa. The F. A. Davis Company, Philadelphia, 1932. Pages 709, illustrated with 516 engravings, including 21 colored plates. Price \$8.00.

This book by Dr. Bland is one of the most up-to-date that I have had the pleasure of reading and studying for some time. He has included all of the newest ideas in obstetrics and his presentation of each is very clear, especially for the student. He goes thoroughly into the subject, yet there is not a lot of unnecessary reading which is often found in the average textbook.

In the chapter on the toxemias of pregnancy the author draws a distinction between the nausea and vomiting of pregnancy and pernicious nausea and vomiting. The tabulated list under the differential diagnosis of pregnancy is very good indeed. He differentiates pregnancy from other conditions found in the abdomen, such as cystic ovary, tubal pregnancy, ascites, fibroid tumor, etc.

The 516 illustrations are fine in that the student gets a mental picture of what he has previously read, which is a very good method of instructing the student as well as the physician engaged in the practice of this art. The 21 colored plates are good illustrations of pathologic conditions. The explanation of the mechanism of labor is very clear. This is a very important part in obstetrics and seems to be a puzzle to most students. Another point brought out that I enjoyed reading was the scale showing the height of the fundus of the uterus at the different months of pregnancy.

ROBERT B. CRICHTON, M.D.

New and Nonofficial Remedies, 1933, containing descriptions of articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1933. Price, Postpaid, \$1.50. Pp. 498; lvi. Chicago: American Medical Association.

The annual editions of this volume contain all that the busy physician needs to know concerning the newer preparations which he is daily importuned by the detail men of the pharmaceutical manufacturers to use. The remedies listed and described here have been examined and found acceptable by the Council on Pharmacy and Chemistry, the deliberative body charged by the American Medical Association with the performance of this

service for the practitioner, who has not the time or means to make the determinations for himself. Among the new preparations admitted during the past year are: Trichlorethylene-Calco, an inhalation anesthetic proposed especially for use in trigeminal neuralgia; Nostal, an additional barbituric acid compound; Decholin and Decholin Sodium, bile salt preparations for use in functional insufficiency of the liver, the sodium salt being suitable for intravenous use when necessary; Biliposol, Bismo-Cymol, and Iodobismitol, bismuth compounds for use in obtaining the systemic effects of bismuth, especially in syphilis; Triphal, a gold salt proposed for use in the treatment of lupus erythematosus; a number of improved liver preparations for use in the treatment of pernicious anemia; two halibut liver oil preparations of high vitamin A and vitamin D content; and Pentnucleotide, the sodium salts of the pentose nucleotides derived from the ribonucleic acid of yeast, proposed for use in infectious conditions accompanied by a leukopenia or neutropenia.

The book contains general articles, descriptive of the classification under which the various drugs are listed. According to the preface, more or less thorough-going revisions have been made of the articles: Arsenic Compounds; Dyes, Iodin Compounds; Liver and Stomach Preparations; Radium and Radium Salts and Silver Preparations.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1932. Cloth. Price, \$1.00. Pp. 104. Chicago: American Medical Association.

The Council on Pharmacy and Chemistry still carries on its work of informing the medical profession concerning the new medicinal products brought out by the various manufacturers of pharmaceuticals. This volume contains the reports on products considered and rejected by the Council during the past year. Among the reports of special interest are: Amertan, an original mixture of tannic acid and merthiolate in a water soluble jelly, marketed under a proprietary, uninforming name; Antiopin, a mixture of indefinite composition offered under a nondescriptive, therapeutically suggestive name and marketed in a way that may foster the drug habit; Eubetin, another insulin substitute for oral administration marketed under a proprietary uninforming name with unwarranted claims; Ferro-Copral, a mixture of saccharinated ferric oxide, manganese citrate and copper proteinate proposed for use in the treatment of pernicious anemia and marketed under a proprietary name with unwarranted therapeutic claims; Hepatex P.A.F., a liver preparation proposed for intravenous use and marketed under a proprietary and insufficiently descriptive name with no satisfactory evidence of the safety of its recommended intravenous use; Bi-So-Dol, an unscientific "alkalinizing" mixture offered under an uninforming proprietary name with exaggerated and unwarranted claims of therapeutic usefulness; Gan-Aiden, consisting mainly of the well known ethyl amino-benzoate (benzocaine), a preparation of undeclared composition marketed under a noninforming, proprietary name; Myodin, Subidin, and Sanguiodin, unscientific preparations of iodine marketed with unwarranted claims and indefinite, incorrect statements of composition, under proprietary uninforming names and Tonikum-Roche (Now Elixir Arsylene Compositum-Roche), a "shot-gun" proprietary "tonic" marketed with misleading therapeutic claims.

Besides the reports on rejected articles, the volume contains "Preliminary" and "Special" reports of exceptional timeliness and value: The preliminary report on Thorotrast, a colloidal thorium dioxide preparation proposed for use in retrograde pyelography and for roentgen visualization of the liver and spleen by intravenous administration, is an excellent example of this class of reports. The articles on Nirvanol and Triethanolamine are also interesting and effective preliminary reports. Among the "special" reports those

on Sulpharsphenamine and Mercurochrome are outstanding. Each report definitively clears up the present status of the drug concerned, the former, on the basis of a questionnaire circulated among leading syphilologists, and the latter on the basis of independent bacteriologic investigation, done by consultants of the Council.

ELEVENTH DISTRICT MEDICAL SOCIETY MEETING

Minutes

The Eleventh District Medical Society met in Waycross, Tuesday, April 11, 1933, at the Y. M. C. A. Auditorium, 2:00 P.M.

Meeting Called to Order—Dr. T. H. Smith, President, Valdosta.

Invocation—Rev. J. B. Walthour, Rector Grace Episcopal Church, Waycross.

Welcome Address—Dr. B. H. Minchew, Waycross.

Response—Dr. J. M. Smith, Valdosta.

Scientific Program

1. The Relation of Medical Education and Legislation to Medical Care—Dr. Edward H. Egbert, Brunswick.

Discussion—Drs. Penland, McCullough, Tolleson, and Egbert.

2. The Prevalence of Trachoma in Georgia—Dr. J. Victor Roule, Albany.

Discussion—Drs. Minchew and Roule.

3. Some Facts on Head Injuries—Dr. B. G. Owens, Valdosta.

Discussion—Drs. Egbert, Minchew, Revell, and Owens.

4. High Carbohydrate Diets in the Treatment of Diabetes in Children—Dr. Alton M. Johnson, Valdosta.

Discussion—Drs. Cheney, Revell, Redfearn, Tolleson, and Johnson.

5. Potential Epilepsy—Dr. G. W. Holmes Cheney, Brunswick.

Discussion—Drs. Simmons, Johnson, and Cheney.

6. Amebiasis—Case Reports—Dr. H. M. Tolleson, Hahira.

Discussion—Drs. Witmer, Redfearn, Turner, and Tolleson.

7. Artificial Pneumothorax—Illustrated with Plates—Dr. J. A. Redfearn, Albany.

Discussion—Drs. Tolleson, Huey, and Redfearn.

Business Session—Valdosta was selected as next meeting place.

Dinner at Okefenokee Golf Club—Guests of Ware County Medical Society, at 7:00 P.M.

W. F. REAVIS, M.D.,

Secretary.

AMERICAN MEDICAL ASSOCIATION SESSION AND TOURS TO THE NORTHWEST

Reservations for the American Medical Association convention tours may be made through the office of the American Express Company, 91 Luckie Street, N.W., Atlanta, or through the office of the Medical Association of Georgia. The World Fair at Chicago and many other places of importance are scheduled for visits by those who make this trip.

NEWS ITEMS

Dr. Newdigate M. Owensby, Atlanta, has been invited to open the discussion on paper by Dr. Schilders entitled "Head Injuries" at the Boston meeting of the American Psychiatric Association. Dr. Schilders is a well-known European neuropsychiatrist whose name is associated with encephalitis peraxialis diffusa, Schilder's disease.

The Terrell County Medical Society met at Dawson on April 28th. Dr. J. H. Lewis, Dawson, was the principal speaker on the scientific program.

The Georgia Pediatric Society held its annual election of officers at Macon, May 10th. Dr. Joseph Yampolsky, Atlanta, will serve during the fiscal year as President; Dr. Benj. Bashinski, Macon, was elected President-Elect; Dr. W. W. Anderson, Atlanta, Vice-President; Dr. Roger W. Dickson, Atlanta, re-elected Secretary-Treasurer.

The Emory Alumni Clinics, Emory University, will be held June 6th through June 9th. There will be lectures, ward walks, and clinics. The annual banquet of the Alumni Association will be on Friday evening.

The Fifth District Medical Society will meet at the Academy of Medicine, 38 Prescott Street, N.E., Atlanta, Thursday, June 29th.

Dr. B. V. Elmore, Rome, Floyd County Commissioner of Health, reports that 86 persons were examined at the chest clinics held at Rome on April 17th and 18th.

Dr. and Mrs. J. H. McClure, Cornelia, entertained the members of the Habersham County Medical Society and Woman's Auxiliary at their home on April 20th.

The members of the Hall County Medical Society were entertained by the Chicopee Manufacturing Corporation of Gainesville on April 19th. Dinner was served at the Club House. The Corporation manufactures gauze, bandages and other supplies used by physicians.

The Grady Hospital Staff Meeting was held on May 9th. Dr. R. B. Ridley, Atlanta, gave a case report, "Carcinoma of the Colon"; Dr. M. T. Harrison, case report, "Hemopericardium with Tamponade"; Dr. Merrill C. Sosman, Peter Bent Brigham Hospital, Boston, spoke on "Serial Studies of Peptic Ulcers".

Judge E. C. Butts in the Brunswick City Court recently ruled that a negro physician who had not paid his professional license tax for three years could not legally be termed a licensed practicing physician and directed a verdict in favor of a defendant negro being sued by the negro doctor.

Dr. R. H. Fike, Atlanta, gave the second of a

series of lectures on cancer at Rich's Tea Room, May 8th. He discussed "Methods to be Used to Avoid Skin Cancer".

The Walker County Medical Society met at Chickamauga on May 5th. Dr. R. M. Coulter, LaFayette, read a paper entitled "Diagnosis and Treatment of Gastric and Duodenal Ulcers". Dr. M. W. Spearman, Chickamauga, led the discussion.

The Habersham County Medical Society and the Hall County Medical Society held a joint meeting at Alto on May 3rd. The members were entertained at supper in the dining hall of the State Tuberculosis Sanatorium. Dr. H. E. Crow, Alto, discussed "Bronchial Diseases".

Officers of the Association elected at the close of the Macon session on May 12th were: President-Elect, Dr. C. L. Ayers, Toccoa; First Vice-President, Dr. J. D. Applewhite, Macon; Second Vice-President, Dr. W. W. Turner, Nashville; Delegate to the A. M. A., 1934-5, Dr. O. H. Weaver, Macon; Alternate Delegate to the A. M. A., 1934-5, Dr. C. H. Sharp, Arlington. Councilors elected for full terms were: First District, Dr. C. Thompson, Millen; Second District, Dr. J. A. Redfearn, Albany; Third District, Dr. J. C. Patterson, Cuthbert; Fourth District, Dr. K. S. Hunt, Griffin. Dr. H. G. Weaver, Macon, was elected to fill the unexpired term of the Councilor in the Sixth District. Dr. Grady N. Coker, Canton, was appointed Councilor for the Ninth District for one year. In the organization of the Council; Dr. J. A. Redfearn, Albany, was elected Chairman; Dr. Grady N. Coker, Canton, Clerk. The eighty-fifth annual session of the Association will be held at Augusta, May 8, 9, 10, 11, 1934.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on May 4th. Titles on the scientific program were: Case Report, "Lymphatic Leukemia with Unusual Bone Changes", Dr. Jas. J. Clark, Atlanta; Clinical Talk, "Fistula in Ano", Dr. Geo. F. Eubanks, Atlanta; "The Use of Stovarsal in the Treatment of Congenital Syphilis", Dr. Joseph Yampolsky, Atlanta, with laboratory collaboration by Donald F. Cathcart and Dr. Inman Smith, both of Atlanta. Discussions were led by Dr. M. Hines Roberts, Dr. Roger W. Dickson and Dr. Wm. H. Kiser, all of Atlanta.

Dr. Chas. H. Richardson, Macon, President of the Association, spoke on "Public Health" before a meeting of the Women's Club at Montezuma on May 5th.

Dr. Ben H. Clifton, Atlanta, spoke before a meeting of health workers in Atlanta on May 4th on "Temporarily Preventing the Use of an Infected Lung and Restoring Its Functions After It Has Healed as a Method of Arresting Tuberculosis".

Dr. Wm. A. Mulherin, Augusta, spoke at a "May Day" Child Health rally at Millen on "Better Babies", May 1st.

Dr. J. C. Rollins, Dalton, read a paper before a recent meeting of the Whitfield County Medical Society at Dalton on "Carcinoma of Pancreas".

Dr. and Mrs. L. R. Bryson, Louisville, entertained the members of the Jefferson County Medical Society and the Woman's Auxiliary at their home on May 1st.

Dr. J. M. Kenyon, Dr. C. E. Pickett and Dr. W. C. Sims, all of Richland, made the health examinations of children for the "summer round-up" by the Parent-Teacher Association at Lumpkin on May 3rd.

The graduating exercises of the Piedmont Hospital School of Nursing, Atlanta, was held at the Atlanta Woman's Club on May 26th.

The New York Polyclinic Medical School and Hospital, New York City, announce the appointment of Dr. Russell L. Cecil, Professor of the Department of Internal Medicine and Attending Physician. Dr. Foster Kennedy has been appointed Consulting Neurologist; and Dr. Joseph E. King, Clinical Professor in the Department of Neuro-Surgery.

Dr. Clarence Lunsford Laws announces the opening of offices at 35 Fourth Street, N.E., Atlanta. Practice limited to internal medicine and allergic diseases.

The Georgia Tuberculosis Association held its annual meeting at the Biltmore Hotel, Atlanta, May 4th.

The Randolph County Medical Society met at Cuthbert on May 4th. Dr. J. C. Patterson, Cuthbert, read a paper entitled "Cancer of the Gastro-Intestinal Tract".

The American Proctologic Society will hold its annual meeting at the Stevens Hotel, Chicago, June 12-13.

The Georgia Medical Society held its regular monthly meeting at Savannah on April 25th. Dr. E. Carson Demmond, Savannah, read a paper entitled "Relief of Pain in Obstetrics"; Dr. J. W. Daniel, Jr., Savannah, "Wound From Sting-Ray—Case Report".

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, May 18th. Titles of papers on the scientific program were as follows: Dr. Mark S. Dougherty, Atlanta, "Melanotic Sarcoma of the Foot Metastasizing to the Heart—Case Report"; Dr. Olin S. Cofer, Atlanta, "Mortality in Obstetrics—Clinical Talk"; Dr. Dunbar Roy, Atlanta, "The Early Greek School of Medicine, Especially the Works of Hippocrates". Discussions were led by Dr. Lewis M.

Gaines, Dr. Richard B. Wilson and Dr. Geo. A. Williams, all of Atlanta.

Dr. Geo. Lombard Kelly, Augusta, Professor of Anatomy at the Medical Department of the University of Georgia, Augusta, was awarded the Crawford W. Long Memorial Prize on May 10th at Macon by the Crawford W. Long Memorial Prize Committee of the Medical Association of Georgia for his paper entitled "The Effects of Injections of Ovarian Follicular and Anterior Pituitary Hormones on Conception and Pregnancy in Laboratory Animals". The article was read before the Association at Savannah, May 19, 1932.

The Georgia Urological Association met at Hotel Dempsey, Macon, on May 11th, during the Macon session of the Association. Officers elected were: Dr. W. B. Emery, Atlanta, President-Elect; Dr. Major F. Fowler, Atlanta, Secretary-Treasurer; Dr. Samuel J. Sinkoe, Atlanta, Chairman of the Executive Committee. The annual scientific meeting will be held at Savannah in October.

Dr. Roy R. Kracke, Emory University, was selected as the first name to be inscribed on the L. G. Hardman Silver Loving Cup as one who had accomplished outstanding work during the past fiscal year. The name of some member of the Association is to be put on the cup annually which is kept on deposit at the state capitol in the Treasury Department.

A Child Welfare Institute was held at Milledgeville on May 3rd and 4th. Dr. Richard Binion, Milledgeville, spoke on May 3rd on "Contagious Diseases". Dr. Y. H. Yarbrough, Milledgeville, spoke on May 4th on "Advice to Mothers".

The Whitfield County Medical Society met at Dalton on May 9th. Dr. Henry L. Sams, Dalton, read a paper entitled "Diarrhea of Children".

Dr. and Mrs. S. A. Scruggs, Americus, entertained the members of the Sumter County Medical Society at dinner in their home on May 4th. Scientific papers were read by Dr. R. C. Pendergrass and Dr. S. A. Scruggs.

The Georgia Medical Society held its regular meeting on May 23rd. Dr. Jno. W. Daniel, Jr., Savannah, read a paper entitled "Circulatory Failure"; discussion was opened by Dr. T. J. Charlton and Dr. J. Reid Broderick, both of Savannah. Dr. Julian K. Quattlebaum, Savannah, gave a case report "Menstruating Scar"; Dr. Chas. Usher, Savannah, case report "Injury to the Brachial Plexus".

The American Public Health Association will hold its sixty-second annual meeting at Indianapolis, Indiana, October 9-12.

OBITUARY

Dr. H. R. Ingram, Coleman; member; Emory University School of Medicine, Emory University, 1895; aged 61; died at a private hospital in Cuthbert on April 29, 1933. He had practiced medicine in Clay and Randolph counties for more than thirty years, widely known and loved by hundreds of friends. Dr. Ingram was not only an active practitioner for those financially responsible but did perhaps more than his share of charitable work. He was a prominent doctor of southwest Georgia, Ex-President of the Randolph County Medical Society and a member until the time of his death. Surviving him are his widow, one daughter and one son. Funeral services were conducted at Fort Gaines and interment in the city cemetery.

Dr. Daniel Holland Ogden, Odum; member; Southern Medical College, Atlanta, 1895; aged 65; died at his home on May 1, 1933. He was born and reared in Wayne county and was one of its best citizens. Since being licensed to practice medicine, he continued active until a few months ago when injured by a falling tree. Dr. Ogden had many warm personal friends and did an extensive practice. Surviving him are two daughters, Mrs. C. R. Thompson, Odum; Miss Susie Ogden, Dundennon, Florida; three sons, O. H., R. C., and T. C. Ogden, all of Odum. Rev. L. E. Pierce, Ludowici, conducted the funeral services from the Odum Methodist church. Interment was in Friendship cemetery near Odum.

John Collier McRae, Atlanta; Emory University School of Medicine, Emory University, 1918; aged 37; died suddenly at his office on May 6, 1933. He was a member of a family which had for many years been prominent in medical activities. During the World War he served with the American Red Cross in Finland and Russia, had charge of the distribution of food and clothing to the refugees and received high commendation from the European governments and Red Cross for his excellent service. Dr. McRae had taken post-graduate work at the Mayo Clinic, Rochester, Minn. He had an excellent practice and maintained the high reputation as a physician for which his father et al had been so favorably known. He limited his practice to urology. Surviving him are his mother, Mrs. Floyd W. McRae, Sr.; two brothers, Dr. Floyd W. McRae, Atlanta; and Kenneth McRae, Detroit, Mich. Funeral services were conducted from the residence by Rev. Henry Stiles Bradley. Interment was in Oakland cemetery.

Dr. John W. Daniel, Franklin; University of Louisville School of Medicine, Louisville, Ky., 1873; aged 84; died suddenly at his home on April 18, 1933. He had practiced medicine in Heard county for almost sixty years. He was charitable in all his practice and many people acknowledge their gratitude to him. Dr. Daniel was known to be just in all his dealings and always a leader in civic work for the upbuilding of the community. Surviving him are his widow, one daughter,

Mrs. E. C. Etchison, Fairfax, Ala.; three sons, J. H., J. L., and Q. C. Daniel. Rev. J. C. Adams conducted the funeral services from the Methodist church. Burial was in the city cemetery.

Dr. James Madison Wellborn, Rock Springs; Chattanooga Medical College, Chattanooga, Tenn., 1893; aged 65; died at a private hospital in Chattanooga, Tenn., April 13, 1933. For a number of years he was a prominent practicing physician in Dade county, but several years ago returned to Rock Springs, his boyhood home. During the World War he served as Captain at the Base Hospital in France. Surviving him are two brothers, J. F. and R. G. Wellborn, both of Rock Springs. Funeral services were conducted by Rev. Thomas from Wildwood Baptist church and interment was in the churchyard.

Dr. Marshall H. Stephens, Bremen; Georgia College Eclectic Medicine and Surgery, Atlanta, 1893; died at a private hospital at Villa Rica on May 6, 1933. He had for many years an extensive practice in Haralson county. Dr. Stephens was well known and had many friends. He was one of the oldest doctors in Haralson county.

BOOKS RECEIVED

Diseases of Tradesmen. By Bernardino Ramazzini (1633-1714) together with biographical notes translated from the French of Francois Claude Mayer (1928) of Budapest and paragraphs from the preface of Dr. James (1746) of London, and of Dr. James (1922) of New York. The abstracts from the 1746 English translation of the Ramazzini work emphasize his comments on dermatological disturbances of workmen. Compiled by Herman Goodman, M.D., New York City. With which is bound *Silk Handler's Disease of the Skin*, being a study of the clinical aspects, and a recital of the search for the cause, including notes on the culture of the silkworm, the handling of the silk from the cocoon to its preparation in the throwing mill for weaving. By Herman Goodman, M.D., New York City. Contains 95 pages. Publishers: Medical Lay Press, New York City.

Wheat, Egg or Milk Free Diet With Recipes and Food Lists. By Ray M. Balyeat, M.D., Associate Professor of Medicine and Lecturer on diseases due to Allergy, University of Oklahoma Medical School; Chief of the Allergy Clinic, University Hospital; Consulting Physician to St. Anthony's Hospital and to the State University Hospital; President of the Association for the Study of Allergy 1930-1; Director, Balyeat Hay Fever and Asthma Clinic. Assisted by Elmer M. Rusten, M.D., and Ralph Bowen, M.D., Chief of Section, Pediatrics, of Balyeat Hay Fever and Asthma Clinic, Oklahoma City, Okla. Contains 149 pages. Publishers: J. B. Lippincott Company, East Washington Square, Philadelphia, Pa.

The 1932 Year Book of Radiology. Diagnosis.

Edited by Charles A. Waters, M.D., Associate in Roentgenology, Johns Hopkins University; Assistant Visiting Roentgenologist, Johns Hopkins Hospital. *Therapeutics*, Edited by Ira I. Kaplan, B.Sc., M.D., Director, Division of Cancer, Department of Hospitals, City of New York; Visiting Radiation Therapist, Bellevue Hospital; Director, New York City and Brooklyn Cancer Institutes; Assistant Radium Therapist, Lenox Hill Hospital; Clinical Professor of Surgery, New York University and Bellevue Medical College. Contains 750 pages. Publishers: The Year Book Publishers, Inc., 304 South Dearborn Street, Chicago, Ill.

Dietetics for the Clinician. By Milton Arlande Bridges, M.D., Associate in Medicine at the New York Post-Graduate Medical School, Columbia University, New York. In Collaboration With Ruth Lothrop Gallup, Dietitian. Foreword by Herman O. Mosenthal, M.D., Director of Medicine at the New York Post-Graduate Medical School, Columbia University, New York. Contains 666 pages. Publishers: Lea & Febiger, Washington Square, Philadelphia, Pa. Price \$6.50.

Light Therapy. By Frank Hammond Krusen, M.D., Director of the Department of Physical Medicine, Temple University School of Medicine, Philadelphia. Foreword by John A. Kolmer, M.D., Professor of Medicine, Temple University School of Medicine. Contains 186 pages. Publishers: Paul B. Hoeber, Inc., 76 Fifth Avenue, New York City, N. Y. Price \$3.50.

TRANSPORTATION INFORMATION

*American Medical Association Meeting,
Milwaukee, Wis., June 12-16, 1933*

The Nashville, Chattanooga & St. Louis Ry. (Dixie Flyer Route) has been selected as the official route to Chicago, thence the Chicago & Northwestern Railway. Through sleepers will leave Atlanta Union Station at 6:20 P.M., June 10th, arrive Chicago 2:00 P.M., leave Chicago via C&NW Ry. at 3:00 P.M., arrive Milwaukee 4:45 P.M., June 11th.

On account of the Century of Progress Exposition being held in Chicago, tickets should be purchased to Chicago from Atlanta. 16-day limit, \$29.45, 30-day limit \$35.65. Proportionate rates from other Southeastern points. By using your identification certificate you may purchase a Chicago to Milwaukee and return ticket for \$4.08. This can be arranged before leaving Atlanta.

Pullman rates have also been reduced to Chicago from Atlanta. Lower, round trip \$10.13; upper round trip \$8.10. Round trip drawing room \$36.75; compartment round trip \$28.50. Seat rate, Chicago to Milwaukee, 75 cents each direction.

You should communicate with G. B. Harris, Division Passenger Agent, NC&StL Railway, 101 Building, Atlanta, immediately for your Pullman requirements and other travel information. He will gladly make your hotel reservations in Chicago, also.

Quite a number are arranging to take the post-convention trip to the Pacific Coast. This is an ideal opportunity to make this combined tour at a minimum cost.

VITAMIN D

The discovery of Vitamin D has been of the greatest importance to mankind. Because of this discovery, rickets—once a familiar childhood menace—is now fast becoming a rare disease in civilized countries.

The value of Vitamin D in the dietary of the pregnant woman cannot be over-emphasized. For it is largely in prenatal life, as McCollum says, that "the size of the fund of that something which we call vitality is determined. It is then that the quality of the teeth, the skeleton, and the perfection of form are determined."

Cocomalt mixed with milk is useful in the dietary of expectant mothers—not only because it has almost twice the food-energy nourishment of milk alone, not only because it provides extra proteins, carbohydrates and minerals (calcium and phosphorus)—but because it is rich in Vitamin D. Cocomalt is licensed by the Wisconsin Alumni Research Foundation under Steenbock Patent No. 1,680,818, and it contains not less than 30 Steenbock (300 ADMA) units of Vitamin D per ounce—the amount used to make one glass or cup.

GOLF, AND INFANT FEEDING

It is possible to play over the entire course with a single club and bring in a fair score. But playing with only one club is a handicap. The best scores are made when the player carefully studies each shot, determining in advance how he is going to make it, then selects from his bag the particular club best adapted to execute that shot.

For many years, Mead Johnson & Company have offered "matched clubs", so to speak, best adapted to meet the individual requirements of the individual baby.

We believe this a more intelligent and helpful service than to attempt to make one "baby food" to which the baby must be adapted.

According to Raymond C. Coburn, New York (*Journal A. M. A.*, May 6, 1933), there is evidence that the pulmonary hypoventilation of anesthesia and operation is an important etiologic factor in early post-operative pneumonia. There is evidence that the combining of means to prevent and promptly to alleviate this pulmonary hypoventilation with the symptomatic administration of carbon dioxide lowers the incidence of early postoperative pneumonia. There is evidence that the prolonged respiratory depression caused by narcotics, nonvolatile anesthetics, shock and hemorrhage increases the incidence of early postoperative pneumonia and lessens the effectiveness of carbon dioxide as a prophylactic.

R. B. DAVIS COMPANY COCOMALT

The tendency to give milk to excess in post-operative and convalescent cases is apt to give the patient a feeling of revulsion. Yet milk is the one food for which there can be no effective substitute.

Modern physicians overcome this aversion to milk—this distaste for a steady milk diet—by flavoring it in a way that makes the color and taste interesting to the patient, yet does not alter the basic fundamentals of the milk itself.

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THE MACON SESSION

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GENERAL MEETINGS

EIGHTY-FOURTH ANNUAL SESSION

MEDICAL ASSOCIATION OF GEORGIA

May 9-12, 1933, Hotel Dempsey

Macon, Georgia

General Meeting

Wednesday Morning, May 10, 1933

The first general meeting of the Eighty-Fourth Annual Session of the Medical Association of Georgia which was held at the Hotel Dempsey, Macon, Georgia, May 9-12, 1933, convened at 10:05 o'clock. Dr. Marvin M. Head, Zebulon, Georgia, the President of the Association, presiding.

The President invited all ex-Presidents in the audience to take seats on the platform, and declared the Eighty-Fourth Annual Session of the Medical Association of Georgia duly opened. He then introduced Reverend Ran-

dolph Claiborne, of Macon, to offer the invocation.

Reverend Randolph Claiborne: O Lord God, source of life and health, giver of truth and knowledge, grant, we beseech Thee, Thy blessing on these, Thy servants, assembled to discuss their services for the relief of the suffering of mankind. Increase in them knowledge of their science and skill in its application, fill them with the sense of the high responsibility of their calling as sharers in Thine own work of healing. Give them zeal in the practice of their art. Grant that through their ministry men may have life more abundantly, their bodies used in longer service, their spirits revived, and happiness in this world increased, to the honor and glory of Thy holy name. Amen.

The president introduced Dr. R. Holmes Mason, of Macon, to extend greetings from the Georgia State Dental Association.

Dr. R. Holmes Mason: Mr. President and Members of the Association: I have the honor and pleasure of bringing greetings to you today from the entire membership of the Georgia State Dental Association, and also extending greetings from the dental profession of Macon. A fraternal delegate to each of our state association meetings can do a great deal for both professions. I feel it is a friendly and cooperative gesture that can mean much to both the professions, and we shall have the pleasure of having with us in Savannah at our state meeting next month Dr. M. E. Winchester of the State Board of Health, as the fraternal delegate representing your organization, and I assure you he will receive a most hearty welcome.

The problems which confront the medical and dental professions today call for a closer and a more united cooperation than ever before, and Dr. Mayo was right when he said not long ago that eighty per cent of all the diseases the human body is heir to are directly traceable to the mouth or teeth, so I am sure we all feel that it is more necessary to cooperate in a friendly manner than ever before.

It is in this spirit, gentlemen, that I greet you this morning, welcoming you to the fair city of Macon, on whose hills Henry Ward Beecher once stood and pronounced it the most beautiful city in the world, and we believe it.

If there is anything we can do to make your visit and your stay more pleasant, please command us at any time. (Applause).

Secretary Bunce presented an abstract of the proceedings of the House of Delegates which was adopted. He also read a telegram from Mr. C. P. Loran, Secretary-

Manager, Southern Medical Association, dated May 10: "Greetings and best wishes for a most successful annual meeting."

It was moved by Secretary Bunce, seconded by several, put to a vote and carried, that the program prepared by the Committee on Scientific Work be adopted as the official program of the meeting.

Dr. S. T. R. Revell, Louisville, read a paper entitled, "Congestive Heart Failure." The paper was discussed by Drs. E. A. Bancker, Jr., Atlanta; Thomas E. Rogers, Macon; R. L. Miller, Waynesboro; S. T. R. Revell, Louisville (closing).

Dr. D. Henry Poer, Atlanta, read a paper entitled, "The Present Status of Iodine Therapy in Hyperthyroidism." The paper was discussed by Drs. Charles E. Waits, Atlanta; D. Henry Poer, Atlanta (closing).

Dr. Henry D. Youmans, Lyons, read a paper entitled, "Acrodynia." The paper was discussed by Drs. William A. Mulherin, Augusta; C. Hall Farmer, Macon; Henry D. Youmans, Lyons (closing).

Dr. Olin H. Weaver, Macon, read a paper entitled, "Fibroid Tumors of the Mesentery, with Report of an Interesting Case." The paper was discussed by Drs. George A. Traylor, Augusta; George W. Fuller, Atlanta; Olin H. Weaver, Macon (closing).

Dr. William A. Smith, Atlanta, read a paper entitled, "Neurological Hazards of Spinal Anesthesia." The paper was discussed by Drs. Charles H. Richardson, Macon; George W. Fuller, Atlanta; Paul L. Holliday, Athens; C. F. Holton, Savannah; L. G. Baggett, Atlanta; William A. Smith, Atlanta (closing).

The president announced that Dr. J. J. Clark, Atlanta, would introduce the guest speaker, Dr. Merrill C. Sosman, of Boston, Massachusetts, whose subject was to be "Through the Alimentary Canal with the Fluoroscope," the Abner Wellborn Calhoun Lecture. Dr. Clark introduced Dr. Sosman, who delivered the lecture.

The meeting adjourned at 1:10 o'clock.

General Meeting

Wednesday Afternoon, May 10, 1933

The second general meeting convened at 2:35 o'clock, President Head presiding.

Dr. Fred C. Whelchel, Alto, read a paper prepared by Drs. M. F. Haygood, H. E. Crow, Kellie N. Joseph and Fred C. Whelchel, entitled, "Collapse Treatment in Tuberculosis and Other Pulmonary Conditions," with slides. The paper was discussed by Drs. Carl C. Aven, Atlanta; J. A. Redfearn, Albany; Champneys H. Holmes, Atlanta; A. J. Mooney, Statesboro; C. K.

Sharp, Arlington; Fred C. Whelchel, Alto (closing).

Dr. James L. Campbell, Atlanta, read a paper entitled, "Diagnosis and Treatment of Aneurysms." The paper was discussed by Drs. J. Calvin Sandison, Atlanta; H. M. Branham, Brunswick; Thomas Harrold, Macon; E. A. Bancker, Jr., Atlanta; James L. Campbell, Atlanta (closing), with slides.

Dr. James N. Brawner, Atlanta, read a paper entitled, "Dietary Deficiencies as Etiological Factors in the Psychoses and Psychoneuroses." The paper was discussed by Drs. R. C. Swint, Milledgeville; Newdigate M. Owensby, Atlanta; George L. Echols, Milledgeville; James N. Brawner, Atlanta (closing).

Dr. Joseph Yampolsky, Atlanta, read a paper entitled, "The Use of Acetarson (Stovarsal) in the Treatment of Congenital Syphilis," with slides. Dr. Don F. Cathcart, Atlanta, read a paper covering his laboratory collaboration on the subject. The paper was discussed by Drs. Benjamin Bashinski, Macon; M. Hines Roberts, Atlanta; A. M. Johnson, Valdosta; Joseph Yampolsky, Atlanta (closing).

Dr. John W. Brittingham, Augusta, read a paper entitled, "Bismuth Poisoning in the Treatment of Syphilis." Dr. Spencer A. Kirkland's discussion was presented, in his absence. The paper was discussed by Drs. L. Minor Blackford, Atlanta; Joseph Yampolsky, Atlanta; John W. Brittingham, Augusta (closing).

Dr. John T. McCall, Rome, read a paper entitled, "Operative Technic and Postoperative Treatment of Fulminating Appendicitis." The paper was discussed by Drs. William L. Cooke, Columbus; Kenneth McCullough, Waycross; Joseph C. Read, Atlanta; W. S. Goldsmith, Atlanta; A. J. Mooney, Statesboro; James L. Campbell, Atlanta; John T. McCall, Rome (closing).

The meeting adjourned at 6:00 o'clock.

General Meeting

Wednesday Evening, May 10, 1933

The third general meeting convened at 8:45 o'clock, Second Vice-President D. H. Garrison presiding.

Chairman Garrison announced that the first thing on the program would be the presentation of the "Badge of Service" to the President, Dr. Marvin M. Head, Zebulon, by Dr. Charles E. Waits of Atlanta.

Dr. Charles E. Waits (Atlanta): Mr. Chairman, Ladies and Gentlemen: A few weeks ago I received a letter that pleased me very much. It read something like this: "I hope you will be able to be in Macon on the night of May 10 to deliver to me the

badge of service from the Medical Association of Georgia. P.S. Make it snappy."

My answer was: "I am honored. I shall do so with brevity."

So, ladies and gentlemen, we come tonight to honor a son of Aesculapius. He has kept the faith. Much could be said in terms of service, but when one says that one has kept the faith of his father, what else could be said? The emblem of service awarded by the Medical Association of Georgia bespeaks the service rendered in olden days, and it was in this thought that the Medical Association of Georgia saw fit to do honor in this way. We are not sentimental, but obedient, and honest in scientific service. This has been the thought and practice of the man we honor tonight. He has by act and deed exemplified the true meaning of the word "service," and it is therefore my happy privilege in the name of the Medical Association of Georgia to award my good friend, Dr. Marvin M. Head, an emblem which characterizes the good which medicine has meant to humanity. Our wish is that he may continue to render always the service of which this emblem is symbolic. (Applause)

President Head: Vice-President Garrison, Dr. Waits, and Ladies and Gentlemen: It is a real pleasure to me to have done all the work I have done for the Medical Association of Georgia. I still expect to continue any real work I can do for it. In my thirty years of constant attendance, with the exception of two years, probably, it has been one of the greatest pleasures I have had to help in any way the medical profession of Georgia. I shall wear this badge with pleasure, wear it with honor, feeling that probably I have not done what I should have done. Thank you. (Applause)

President Head took the chair and announced that Dr. T. F. Abercrombie, Atlanta, would introduce Dr. Oliver C. Wenger, to give his address on "Diagnosis and Treatment of Syphilis."

Dr. T. F. Abercrombie (Atlanta): I have the honor to introduce to you tonight a man interested in a phase of medicine and a public health problem that is of great importance to all, syphilis. Over forty per cent of the diseases reported to the State Board of Health are of this disease. Dr. Wenger has studied this disease for more than fifteen years. His interest in the past few years has been particularly centered in syphilis in the colored race, and he has made some significant contributions toward the treatment of this disease. I take great pleasure in introducing to you Dr. Oliver C. Wenger of the United States Public Health Service, Hot Springs, Arkansas.

The audience arose and applauded.

Dr. Oliver C. Wenger, United States Public Health Service, Hot Springs, Arkansas, read his paper entitled, "The Diagnosis and Treatment of Syphilis."

President Head: The Crawford W. Long Memorial Prize was to be presented tonight by Dr. W. R. Dancy. In his absence, Dr. V. P. Sydenstricker was supposed to present it. It was finally decided that we would like to have Dr. Stewart R. Roberts of Atlanta present this prize. (Applause)

Dr. Stewart R. Roberts (Atlanta: Mr. President, Ladies and Gentlemen: The reason Dr. Sydenstricker withdrew was because he was a citizen of Augusta and the gentleman who receives the prize is a fellow citizen of Augusta, and citizens of Augusta are very modest. Whether they should be or not, I leave to you.

It is a very interesting fact that most of the cities of Georgia, with the single exception of Atlanta, were built on a river bottom. Beginning with Rome, Columbus, Macon, Albany, Savannah, they were all built on a river bottom. Each of those cities, despite its greatness, might have been, had it not been for the progress of American civilization, a really first class corn farm. We are glad they are not farms.

There is in Georgia no more interesting city than Augusta. Sometimes I think we hardly realize how very interesting it is, and what a large part it has played in the history of Georgia and in the history of the United States.

Would it surprise you to know that in 1799, the city having been incorporated in 1792, there were about 6000 people in the city, over 100 stores, and so prosperous were Augusta and the surrounding regions of South Carolina and Georgia that a ten-year-old boy could run a mile on cotton bales on Broad Street.

The first library in Georgia was organized in Augusta by Richard Henry Wilde, who was the author of "My Life is Like a Summer Rose." He also organized the first theatrical company in Georgia, which first played in Augusta.

The director of the Richmond Academy, or the principal (they called him both), was named Augustus Baldwin. He was the Principal of the Richmond Academy in Augusta in 1799. In his classes was the most "onery" looking boy in the school, one Augustus Longstreet. Gus wore a tall, peaked cap, and he misbehaved most of the time, and he had the most unique anatomical and physiological ability of making faces with one side of his face and keeping the other solemn and reverent. When he misbehaved

the standard punishment was to put him on a high stool just to the left of the teacher. He misbehaved with the left side of his face, and kept the right side toward the teacher very solemn and still and reverent. The teacher could not understand why he caused such misbehavior, and sent word to his very proud father that he thought Gus was crazy, and his father, being a sensitive man and a member of the City Council, took his family to South Carolina and stayed for five years. He would not live in any town and send his boy to school where the tuition was ten dollars a month, where the principal accused him of having an insane son, and that boy only nine years of age. That boy lived to be the author of the most famous literature that Georgia has ever produced, the famous "Georgia Scenes." He lived to be the President of the University of Mississippi, President of the University of South Carolina, and really the inspirer of Uncle Remus and his negro literature.

If one could give the history of Augusta, one would also give the history of John C. Calhoun, because Calhoun lived just across the river in the Abbeville district, and went to school at Willington to Moses Waddell, Chancellor of the University of Georgia from 1819 to 1829. In those days there was denominational rivalry, and the Baptists started one school and the Baptists said the Presbyterians owned the University of Georgia and the Methodists couldn't go to either place, so they started Emory College. That is the true origin of Emory College.

If one could read and know the history of the famous Richmond Academy, probably the first high school in Georgia and certainly the most famous preparatory school in the state, one would know largely the history of Georgia.

The gentleman who is honored tonight taught, as did Augustus Baldwin, in the Richmond Academy; and one of the most honored members of our state Association, and one of the most brilliant members of American medicine, who is said to be the best read man in American medicine, Dr. W. R. Houston, was himself formerly taught in Richmond Academy.

If some of you read carefully the American Medical Journal, one of the issues of the last few weeks, you saw an article on the production of estrus and a very profound research by one Dr. Lombard Kelly, the Professor of Anatomy in the University of Georgia. I read it very carefully when it came out, little thinking that as a member of the committee I would later read a similar paper as one of the papers submitted to the committee for the Crawford W. Long Prize.

You no doubt remember that the first gentleman who received the Crawford W. Long Prize was Dr. M. Hines Roberts of Atlanta, for his very important research on the spinal fluid of new-born babies. That research went all over the medical world. Indeed, it went so far that some of the members of the anti-vivisection society of Boston tried to do things to Dr. Roberts because he did lumbar punctures on new-born babies. He did it very painlessly and very skillfully. Another doctor from a small town, sitting over there on the left, Dr. Tolleson, received the Crawford W. Long Prize, the second award, for his use of horse serum in the treatment of hemoglobinuria of malarial fever. There was no award made last year. I think the committee this year unanimously decided to give the award to this very profound and far-reaching research on the ovarian hormone and the production of estrus in the white rat, as carried out by Doctor Kelly.

I have read the paper three times, and each time I read it, the brilliancy of the conception, the painstaking thoroughness of the research, the deep scientific ability of the gentleman who did the research impressed themselves upon me over and over again.

It gives me great pleasure, therefore, acting third in the series, first for Dr. Dancy, second for Dr. Sydenstricker and third for the committee, to present this prize to Dr. Lombard Kelly, Professor of Anatomy of the University of Georgia, Augusta, Georgia, who formerly taught in the Richmond Academy.

The audience arose and applauded.

Dr. G. Lombard Kelly (Augusta): Members of the Association, first I would like to thank Dr. Roberts for his very kind reference to the work which has been the subject of this administration on the award of this prize and to make a few remarks that may be apropos on this occasion. In that connection I would like to say a few words about the difference between pure research and what might be termed practical research.

Doctor Long, in his epoch-making work, was very practical minded. He made certain observations, and he brought them into use in a very practical manner. The history of this work of Doctor Long is so well known to you all that it is not necessary, of course, for me to repeat any of it at this time.

In regard to the other form of research which has been called pure research, I understand that it means the careful experimentation, observation and collection of facts, de-

ductions made from these facts, and so on, and not always with an immediate idea of what you can gain from these experiments and observations. I might call to mind, for example, the simple experiments in magnetism, which led to the discovery or the invention of the dynamo. That is a typical example in physics. In the field of biological science I should like to refer to the discovery of Schott's and Nicolaier of the fact that estrus in lower forms can be determined. That was an epoch-making discovery which has furnished the basis for a very important means of biological studies of the ovarian hormone and other things. These two men were working in an endeavor to discover what was the proper time to breed guinea pigs. It was not known that this animal has an estrus period of sixteen days. It was an accidental discovery. We were working on a problem in genetics, and by taking these cells and putting them on a slide and staining them it was possible to determine what stage of the ovarian cycle the animal was in. We were trying to determine what effect the fumes of alcohol would have on the offspring of guinea pigs. I might add that they finally discovered that those offsprings from parents subjected to the alcoholic fumes were superior to those which had been used as control. I mention this to show you that in one experimental research another important discovery was made, and at the present time this method is of use in the Allen-Doisy test, and the work outlined by R. T. Frank for the measurement of estrin content of the blood in woman, in order to determine whether there is a sufficient amount of estrin in the blood, and so on.

There are many examples of this kind in which investigators who have been carrying on work along certain lines have finally discovered accidentally other things of an important nature. Therefore I am sorry it is necessary at times to defend those workers engaged in pure research, and that they sometimes have to answer the accusations of those who do not understand fully, who think they are wasting their time, not doing things worth while.

I remember, for example, a case in regard to a paper I read here four years ago, about a study I made in artificial insemination in guinea pigs. A certain physician was discussing this with me, and I explained to him that we had accomplished an artificial insemination by means of taking the semen from a guinea pig recently killed for complement. We succeeded in four out of six cases in inseminating the animal by this artificial meth-

od. The physician wanted to know what good it was. I don't say anyone has tried to inseminate a woman, but we don't know that it may not some time show its worth.

I don't think pure research needs any defense. But those who do not understand at times are apt to criticize this particular form of research.

To return to the subject of Dr. Long's discovery, I should like to refer, in closing, to the description of an operation that was performed in the Medical Department of the University of Georgia, when it was not called by that name, prior to the time of 1842, when ether had not been used for anesthetic purposes. The operation was performed by some of the old professors of surgery. The patient had a carcinoma of the maxillary sinus. I mention it because there is an amusing sidelight placed on the description of the case. At the close of the description, the narrator states that the patient stood the operation with great fortitude. It took only nine men to hold him on the table. (Applause)

The meeting adjourned at nine-fifteen o'clock.

General Meeting

Thursday Morning, May 11, 1933

The fourth general meeting convened at nine o'clock, President Head presiding.

Dr. Guy J. Dillard, Columbus, read a paper entitled, "The Management of Chronic Arthritis." The paper was discussed by Drs. G. S. Murray, Columbus; Theodore Toepel, Atlanta; Hal M. Davison, Atlanta; W. P. Jordan, Columbus; L. Minor Blackford, Atlanta; Stewart Roberts, Atlanta; Guy J. Dillard, Columbus (closing).

President Head: A few weeks ago, the Secretary-Treasurer of the Georgia Pharmaceutical Association asked us to send a delegate to their meeting. We at the same time asked them to send a delegate to our annual session.

Hon. T. W. Oliver, Eastman, from the Georgia Pharmaceutical Association is present now, and I shall extend to him the privilege of the floor.

Hon. T. W. Oliver (Georgia Pharmaceutical Association): I feel quite a trepidation in appearing before this medical Association. I have never quite gotten over the feeling I had as a college man in appearing before my professors; I presume that it is a mental inferiority complex. I feel the same in appearing on the program of an association of men who are so much superior in their particular field, and while my associations with physicians

have been extended over a long period of years, I never have gotten over the feeling of inferiority in the presence of a doctor. However, it is a pleasure for me to represent my association here today. This is, as I understand it, a new arrangement of good-will between the two associations, and they picked on me to represent my association here this morning.

The pharmacists of Georgia recognize their inferiority when it comes to the particular field that you represent, and realize that pharmacy is merely a handmaid to medicine. We do not dare call ourselves professional men. We may be in a few isolated instances artists, but it could hardly be called a profession. Nevertheless, we do feel that we are to a very large extent associated with your profession in the program of health and the prevention of disease, and it is that idea that we have in mind in the exchange of delegates to the two associations. We feel that we possibly have been an aid to you in the past, are now, and hope to be in the future, in that we provide for you to some extent the preparations which you desire to use. And I dare say a number of you have close friends among the pharmacists.

I realize that pharmacy is a double-barreled business. It is both a business and an art. But we feel that our particular branch has done a great deal to provide you with those things that you desire to use, and we feel that, under the direction of men of your profession, who are also skilled in our own field, we have prepared for you in our great laboratories a great many of the products that you use in your profession. And while we know that we are confined to one narrow line and in one narrow field, nevertheless we feel that we are contributing to a very great extent, as best we know how, to the program of health that you are interested in.

Our association, which meets in August on the twenty-third and twenty-fourth of this month, will be pleased to have a delegate from your Association. We have always desired the closest cooperation between yours and ours, between your profession and our art, and we do all we can to provide for you those things that you need.

It is useless for me to remind you of the importance of the profession you represent. Someone facetiously remarked that whether a man be an osteopath or a homeopath, he is like the paths that lead not to glory, but to the grave. We feel that is not true, but he stands as a block to the grave instead of a path to the grave, and the doctor represents to the laity and to the druggist and to everyone else

the last hope. So the profession you represent is one of the most profound and important, one of the most sobering professions that a man can possibly be engaged in.

It was my peculiar pleasure to be of some assistance, both to those of my own calling and to your profession, in my recent legislative experience. Pharmacy has been for a great many years trying to lift itself up to a higher level of professionalism, if I might dare to use that word "professionalism", and in furtherance of that cause we recently raised the educational standards of pharmacy so that now a pharmacist must be a graduate of either a three or four-year college of pharmacy recognized by our board. Heretofore, in Georgia, not true in other states, pharmacists have been able to become licensed after having served a period of three years under a licensed pharmacist, and then with a little study stand the board and be a druggist. That will no longer be true. Pharmacists from now on will be educated men in their particular field. We will require them to graduate with a degree from a three or four year college, before they are permitted even to appear before our board for examination. We feel that by that step we have raised the qualifications to the point where you can recognize in the pharmacist an educated man in his field. I am quite sure that many of you have run into pharmacists who were not educated in the particular field in which they had been licensed. From now on we feel that we will be better educated and better able to carry out your instructions, and better prepared to know what your requirements are. We feel we will be more able, as handmaids to your profession, to fulfill our duty in the program of prevention and cure.

It was also my peculiar pleasure to be of some benefit to your Association, inasmuch as it seemed desirable on your part that your Board of Health be reestablished, and it was my pleasure to put that bill through the Senate. I asked the doctors, and they very courteously acquiesced, for the privilege of naming on that board two pharmacists along with the ten doctors and the two dentists. That is another step that we feel is in line of recognition of the standing of pharmacy, that we are now represented on the Board of Health along with physicians and dentists. You may feel assured, gentlemen, that we will name two of the most outstanding and representative citizens in our line of business, to work with you in that great field of preventive medicine.

I am not at all in sympathy with the recent and what I feel is an unnecessary eco-

nomical program that was pursued by some in the recent legislature. While I feel it is a time for economy and a time for inflation of government, I feel that possibly some went entirely too far, because this period of depression is, as all of us know, temporary. We know that even now the dollar every day is becoming cheaper and cheaper. To have pursued a program desired by some in our recent legislature would have been suicidal. So it was my pleasure to work as hard as I could to prevent too low cutting of the program of the appropriation of our health work. We did all we could to hold that up as it should have been. We feel, my friends, that that is one of the greatest functions of government. If government is in the interest of the people and for the people, certainly no function of government, in my estimation, can be more important than preventive medicine. I do not feel that the education of a defective body is to any advantage, particularly to the state or to the individual. I feel that preventive medicine should go hand in hand with the education of the mind. Therefore, I attach just as great importance to that field as a function of state as I do to the education of the mind.

I feel that that wave of economy, which I think in some instances is false and uncalled for, is largely responsible for an effort that is now being made to abolish one of our great medical institutions and I am thoroughly in sympathy with those of you and those of the other citizens of the state who desire to prevent that abolition. (Applause)

I feel, gentlemen, that the state of Georgia has not yet reached such a state of poverty that she should think it desirable to cease education in your great profession. She has not abandoned the field of education in law, she has not abandoned it in pharmacy, much less significant, indeed, than is yours. She has not abandoned it in the field of teaching, in the field of engineering, in the field of commerce and in the field of architecture. Why should, then, the State of Georgia, through a false economy, seek to abandon education in the field of medicine? (Applause) It is a foolish thing, and I trust that your Association can bring about such forceful political action that the Board of Regents will rescind that action and let the State of Georgia remain in this great field of educating men in your profession. No one denies the fact that a doctor is one of the most important citizens in any community. Any community feels itself poor which has no doctor. Often they lament the fact to me. There have been those who have lamented the fact that the educational requirements in medicine, the standards,

are a little too high. Be that as it may, any community is indeed poor that has no doctor. It can do without a lawyer, without an engineer, but it must have a doctor and a teacher and a preacher. And, gentlemen, I shall be more than pleased to use what little influence I have with members of the Board of Regents or anyone else to prevent that disastrous thing.

I am very happy to represent the Georgia Pharmaceutical Association here today. We feel we are trying to improve our standards ethically, professionally, and in every other way. We were able through the last legislature to get the bill raising the requirements in our field, and we feel we are on the up grade, and from now on we will merit your respect much more than we have in the past. We will be more than pleased to have your representative appear before our association in Augusta, and I thank you. (Applause)

Dr. J. Cox Wall, Eastman, read a paper entitled, "The Challenge to the General Practitioner." The paper was discussed by Drs. Charles H. Richardson, Macon; William A. Mulherin, Augusta; J. C. Patterson, Cuthbert; Stewart Roberts, Atlanta; L. C. Allen, Hoschton; R. L. Miller, Waynesboro; Benjamin H. Minchew, Waycross; J. Cox Wall, Eastman (closing).

Symposium on "Hypertension": Dr. Abner W. Calhoun, Atlanta, read a paper entitled, "Etiology". Dr. Edgar R. Pund, Augusta, read a paper entitled, "Pathology". Dr. William W. Chrisman, Macon, read a paper entitled, "Signs and Symptoms".

The balance of the symposium on "Hypertension" was deferred until the afternoon session, and the meeting adjourned at twelve-five o'clock.

General Meeting

Thursday Noon, May 11, 1933

The fifth general meeting convened at 12:10 o'clock, First Vice-President Dr. A. A. Morrison presiding.

President Head read his presidential address, "Organized Medicine."

Miss Mary Rountree sang a solo, "Let Not Your Heart Be Troubled."

President Head resumed the chair, and announced that Dr. Mooney would take charge of the memorial exercises.

Dr. A. J. Mooney, Statesboro, read a paper entitled, "In Memoriam."

The meeting adjourned at 12:55 o'clock.

General Meeting

Thursday Afternoon, May 11, 1933

The sixth general meeting convened at 2:35 o'clock, President Head presiding.

Continuation of the symposium on "Hypertension": Dr. V. P. Sydenstricker, Augusta, read a paper entitled, "Complications." Dr. Thomas J. Charlton, Savannah, read a paper entitled, "Treatment." The symposium was discussed by Drs. Charles C. Hinton, Macon; Steve P. Kenyon, Dawson; Henry C. Sauls, Atlanta; James E. Paullin, Atlanta; H. M. Tolleson, Hahira; Stewart Roberts, Atlanta; G. S. Murray, Columbus; L. Minor Blackford, Atlanta (closing for Abner W. Calhoun, Atlanta); Edgar R. Pund, Augusta (closing); James E. Paullin, Atlanta (closing for V. P. Sydenstricker, Augusta).

Dr. Hartwell Joiner, Gainesville, read a paper entitled, "Chronic Recurrent Migratory Colitis of the (Bargen) Diplostreptococcus Infection Type." The paper was discussed by Drs. Roy R. Kracke, Emory University; Stewart R. Roberts, Atlanta; Hartwell Joiner, Gainesville (closing).

Dr. George F. Eubanks, Atlanta, read a paper entitled, "Fistula in Ano," with lantern slides. The paper was discussed by Drs. J. C. Patterson, Cuthbert; M. L. Malloy, Vienna; Lon Grove, Atlanta; George F. Eubanks, Atlanta (closing).

Dr. Thomas Bolling Gay, Atlanta, read a paper entitled, "Atrophy of the Liver in Children." The paper was discussed by Drs. R. Cullen Goolsby, Jr., Macon; Lon Grove, Atlanta; J. G. Gay, Atlanta; Thomas Bolling Gay, Atlanta (closing).

Dr. Charles B. Upshaw, Atlanta, read a paper entitled, "Management of the Third Stage of Labor," with slides. The paper was discussed by Drs. Otis R. Thompson, Macon; H. M. Tolleson, Hahira; Charles E. Boynton, Atlanta; W. C. Goodpasture, Atlanta; Charles B. Upshaw, Atlanta (closing).

Dr. J. C. Brim, Pelham, read a paper entitled, "Pylorospasm, or Congenital-Hypertrophic-Stenosis of the Pylorus." The paper was discussed by Drs. Grady N. Coker, Canton; Charles E. Boynton, Atlanta; R. C. McGahee, Augusta; William L. Funkhouser, Atlanta; J. C. Brim, Pelham (closing).

Dr. Edward S. Wright, Atlanta, read a paper entitled, "Cancer of the Larynx," with motion pictures. The paper was discussed by Drs. Benjamin H. Minchew, Waycross; L. Minor Blackford, Atlanta; Hugh M. Lokey, Atlanta; B. M. Cline, Atlanta; Calhoun McDougall, Atlanta; Edward S. Wright, Atlanta (closing).

The meeting adjourned at 6:15 o'clock.

General Meeting
Friday Morning, May 12, 1933

The seventh general meeting convened at 9:15 o'clock. President Head presiding.

Secretary Bunce presented an abstract of the minutes of the House of Delegates which was adopted by the Association.

Dr. Thomas Harrold, Macon, read a paper entitled, "The Aspiration and Air Injection Method of Treating Empyema," with lantern slides. The paper was discussed by Drs. Cleveland D. Whelchel, Gainesville; W. Arthur Selman, Atlanta; Frank K. Boland, Atlanta; Thomas Harrold, Macon (closing).

Dr. Frank K. Boland, Atlanta, made a motion that the Secretary be asked to send Dr. Charles C. Harrold a telegram of sympathy from the Medical Association of Georgia, expressing a hope that he would soon recover. The motion was seconded, put to a vote and carried.

Dr. Luther C. Fischer, Atlanta, read a paper entitled, "Appendicitis Complicated by Adhesions and Bands," with lantern slides. The paper was discussed by Drs. John W. Turner, Atlanta; C. W. Roberts, Atlanta; Frank Boland, Atlanta; Luther C. Fischer, Atlanta (closing).

Dr. R. M. Harbin, Jr., Rome, read a paper entitled, "Diathermy in the Abortive Treatment of Pneumonia," with slides. The paper was discussed by Drs. Cyrus W. Strickler, Atlanta; Hal M. Davison, Atlanta; Dr. Harbin indicated that he had no closing discussion.

Dr. Edgar G. Ballenger, Atlanta, read a paper entitled, "Transurethral Resection of the Prostate Gland, a Report of 125 Cases," with slides, prepared by himself and Drs. Omar F. Elder, Atlanta, and Harold P. McDonald, Atlanta. The paper was discussed by Dr. Earl Floyd, Atlanta; Dr. Ballenger indicated that he had no closing discussion.

Dr. Earl Floyd, Atlanta, read a paper entitled, "Injection of Hydroceles with the Newer Sclerosing Solutions, An Experimental Study," prepared by himself and Dr. James L. Pittman, Atlanta. The paper was discussed by Drs. Wallace L. Bazemore, Macon; W. L. Champion, Atlanta; Earl Floyd (closing).

Dr. Robert L. Kennedy, Metter, read a paper entitled, "Thrombo-Angiitis Obliterans." The paper was discussed by Drs. F. G. Hodgson, Atlanta; Robert L. Kennedy, Metter (closing, with slides).

Dr. William F. Lake, Atlanta, read a paper entitled, "Correlation of X-Ray Findings with Clinical Symptoms in Brain Lesions,"

with slides. There was no discussion of the paper.

President Head announced that the next order of business would be the report of the committee appointed to select the most outstanding work accomplished by any member of the Association during the year 1931-32. The name of this member will be placed on the L. G. Hardman Loving Cup.

Dr. W. A. Selman (Atlanta): Chairman, Mr. President and Gentlemen: As Chairman on a Committee on the Ex-Governor L. G. Hardman Loving Cup that was presented to the Medical Association of Georgia with the request that each year a name be added and engraved thereon of some public health official, some surgeon, or some medical man who had done some outstanding work in the state that year, I wish to report as follows:

It is quite a problem indeed to select a man who has done the most outstanding work for the medical profession in any one year. For instance, some man in some section of the state might have drained a malarial swamp and saved more lives than anyone will ever know. However, possibly he did not report that and could not report it. Of the reported work in the state of Georgia we selected the work of Dr. Roy R. Kracke, Professor of Pathology and Bacteriology of Emory University. I shall call your attention for just one moment to the outstanding things he has done.

Doctor Kracke worked out a better method for blood cultures. These methods are now in general use throughout the country. Second, he was first to show the mechanism and cause of agranulocytosis. Third, he was the first to produce agranulocytosis in laboratory animals. Fourth, he was the first to describe thrombopenic agranulocytosis in human beings.

Doctor Kracke was awarded first prize at an exhibit at the Southern Medical Association in Birmingham in 1932. He was also awarded a gold medal and first prize at an exhibit at the Association of American Pathologists at New Orleans in 1932.

Doctor Kracke is here, and it is with much pleasure that I present him to this Association and assure him that his name will be first to grace the cup which is to be kept in the Treasury at the State Capitol and brought forth each year to have a name added thereto. Doctor Kracke. (Applause)

Dr. Roy R. Kracke (Emory University): Mr. Chairman, Members of the Medical Association of Georgia: Since hearing Doctor Selman recount some of my supposed achievements, I am beginning to wonder if I am the

fellow he is talking about. I feel, of course, that the Medical Association of Georgia is conferring a great honor upon me to inscribe my name upon the Hardman Loving Cup. I do feel, however, that the Hardman Loving Cup does serve a very useful purpose. It at least has this effect upon me: The honor that you have conferred upon me stimulates me to attempt to do a better type of work and more research work in the future. We have accomplished very little, it seems to me, in our various types of research activity, although Doctor Selman would make it appear that we have done a great deal.

I was talking with one or two doctors last night about what we have found out about agranulocytosis, and I am forced to confess that we know little or practically nothing about it. Our work has dealt chiefly with diseases of the blood, and it has been ramified in its character and diversified in type. There is not a single outstanding achievement that can be pointed to in our particular research work.

I should like publicly to express and record my gratitude to the Medical Association of Georgia for conferring this honor upon me, and I should further like to publicly express my gratitude to my various associates who have published material with me, and to my assistants in the Department of Pathology at Emory University, without whom practically none of this work could have been done. So I accept this honor at your hands, not only in behalf of myself, but in behalf of the members of my department at Emory University and my colleagues there, with whom I have collaborated. Thank you. (Applause)

President Head: Dr Frank Boland has a resolution to present.

Dr. Frank K. Boland (Atlanta): Before presenting this resolution, I should like to give you a little bit of information. Probably some of you are not aware of it. This gavel, which you heard sound on the table so loudly just a moment ago, was made from a newel post in the home of Crawford W. Long in Athens. It is a beautiful piece of mahogany. We had permission to remove the post, and it was covered with layer after layer of white paint, and no one dreamed that such beautiful wood was underneath. The turner who made the gavel said he was astonished to find the most beautiful piece of mahogany he had ever seen. I remind you that it is a memento of Crawford W. Long.

You see on the wall a picture which represents a bronze tablet which is to be pre-

sented to the American College of Surgeons by the Fellows of the American College of Surgeons living in Georgia. It will serve two purposes. For the next six months it will repose in the Georgia exhibit at the Chicago Fair, where, I am told, it will be seen by 40,000,000 people who expect to visit that fair. So we think we are still further honoring the name of this distinguished Georgian who was a charter member of the Association in 1849.

I shall now read the resolution:

"Whereas, The Medical Association of Georgia has just completed one of the most enjoyable and profitable sessions in its history, be it

"RESOLVED That we express our thanks and appreciation to the following agencies which have contributed so much to our pleasant meeting in Macon:

The Macon Medical Society of Bibb County.

Ladies of Macon.

Press of Macon.

Dempsey Hotel.

Idle Hour Country Club."

I move its adoption.

The motion was seconded, put to a vote and carried.

President Head: Next is the election of officers. First is the election of the President-Elect.

Dr. Grady N. Coker (Canton): Mr. President and Members of the Medical Association of Georgia: Twenty-five years is a long time, and that is how long it has been since the Ninth District has had a President. I propose to nominate today a man who has been Councilor for that district for twelve years, a district that has been one of the best organized districts in the state, a man well loved in that district, well loved in this Association, whose honesty and integrity you all know. I take great pleasure in nominating Dr. C. L. Ayers of Toccoa, Georgia. (Applause)

Dr. W. A. Selman (Atlanta): In rising to second this nomination, I beg to say that I have known Doctor Ayers as a classmate, a college mate, and since then in the practice of medicine. I have known his work in the Council. He might be called the watch dog of the treasury, because whenever reductions can be made he has been pulling for them for years, and yet he is unwilling to sacrifice any of the wonderful things that this Association stands for. It gives me great pleasure to second the nomination of Doctor Ayers for President-Elect.

President Head: Are there any other nominations? If not, I will instruct the Sec-

retary to cast the unanimous vote for Dr. C. L. Ayers.

Secretary Bunce: I hereby cast the unanimous ballot for Dr. C. L. Ayers as President-Elect. (Applause)

President Head: I certainly appreciate the enthusiasm we have for Doctor Ayers.

The next nomination is for First Vice-President.

Dr. R. L. Miller (Waynesboro): It gives me pleasure to nominate for First Vice-President a man who has served Bibb County and Macon for a number of years most efficiently, and who is almost the unanimous, if not the unanimous choice of the physicians in Macon and in Bibb County, Dr. J. D. Applewhite. (Applause)

Dr. A. R. Rozar (Macon): I wish to second the nomination. He has been a valuable man and member of the Bibb County Medical Society.

President Head: Are there any other nominations? If not, I will instruct the Secretary to cast the unanimous vote for Dr. J. D. Applewhite as First Vice-President.

Secretary Bunce: I hereby cast the unanimous ballot for Dr. J. D. Applewhite as First Vice-President.

President Head: I declare Doctor Ayers elected as President-Elect, and Dr. Applewhite as First Vice-President.

The next nomination is for Second Vice-President.

Dr. J. Cox Wall (Eastman): It gives me a great deal of pleasure to nominate a young man from South Georgia, as Second Vice-President. This young man lives in Berrien County, but he is a delegate to the state convention from Lowndes County. It shows you the esteem in which he is held in his community. I, with a great deal of pleasure, nominate Dr. W. W. Turner of Nashville, Georgia. (Applause)

Dr. Turner's nomination was seconded.

President Head: Are there any other nominations? If not, I will instruct the Secretary to cast the unanimous vote for Dr. W. W. Turner.

Secretary Bunce: I hereby cast the unanimous ballot for Dr. W. W. Turner as Second Vice-President.

President Head: I declare Doctor Turner elected. Next is nomination of one delegate to the A. M. A. to succeed Dr. O. H. Weaver.

Dr. R. L. Miller (Waynesboro): All of us who know anything about the House of Delegates of the American Medical Association know that a man has to go there until he loses more hair than Doctor Weaver has lost to become a man to whom attention is

paid. Doctor Weaver has been there and served us as well as he could, and I want to nominate him to succeed himself as delegate to the A. M. A.

Dr. William H. Myers, Savannah, and Dr. J. O. Elrod, Forsyth, seconded the nomination of Dr. O. H. Weaver.

President Head: Are there any other nominations? If not, I will instruct the Secretary to cast the unanimous ballot for Dr. O. H. Weaver to succeed himself.

Secretary Bunce: I hereby cast the unanimous ballot for Dr. O. H. Weaver as delegate to the American Medical Association for 1934 and 1935.

President Head: I declare Doctor Weaver elected. The next is Dr. O. H. Weaver's alternate delegate to the A. M. A., to succeed Dr. C. K. Sharp.

Dr. Frank K. Boland (Atlanta): I nominate Dr. C. K. Sharp to succeed himself in that office.

The nomination of Doctor Sharp was seconded by several.

President Head: Are there any other nominations? If not, I will instruct the Secretary to cast the unanimous vote for Doctor Sharp to succeed himself.

Secretary Bunce: I hereby cast the unanimous ballot for Dr. C. K. Sharp as alternate delegate to the A. M. A. for the years 1934 and 1935.

President Head: I declare Doctor Sharp elected. Next is the election of Councilors for the First, Second, Third and Fourth Districts. We will first consider the First District. We are supposed to elect Councilors from those nominated by the District Societies.

Dr. R. L. Miller (Waynesboro): As regards the First District, at the District meeting there was no action taken.

Dr. William H. Myers (Savannah): Mr. President, I want to nominate a man for the First District who has been Vice-Councilor for that District for a number of years, Dr. C. Thompson.

Dr. R. L. Miller (Waynesboro): It gives me peculiar pleasure to second the nomination of Doctor Thompson.

President Head: Are there any other nominations? If not, I will instruct the Secretary to cast the unanimous vote for Doctor Thompson.

Secretary Bunce: I hereby cast the unanimous ballot for Dr. C. Thompson as Councilor for the First District for a three-year term.

President Head: I declare Doctor Thompson elected. The next is the Second District.

Dr. C. K. Sharp (Arlington): For the Second District, Dr. J. A. Redfearn has been nominated by the District Medical Society, and I nominate him.

Dr. Frank K. Boland (Atlanta): I second the nomination of Doctor Redfearn.

President Head: Are there any other nominations? If not, I will instruct the Secretary to cast the unanimous vote for Doctor Redfearn.

Secretary Bunce: I hereby cast the unanimous ballot for Dr. J. A. Redfearn as Councilor for the Second District for a three-year term.

President Head: I declare Dr. J. A. Redfearn elected. Next is the Third District.

Dr. W. A. Coleman (Eastman): At an unofficial meeting of the Third District, Dr. J. C. Patterson's name was suggested. I nominate him for Councilor for the Third District.

Doctor Patterson's nomination was seconded by several.

President Head: Are there any other nominations? If not, I will instruct the Secretary to cast the unanimous vote for Doctor Patterson.

Secretary Bunce: I hereby cast the unanimous ballot for Dr. J. C. Patterson as Councilor for the Third District for a three-year term.

President Head: I declare Doctor Patterson elected. Next is the Fourth District.

Dr. O. W. Roberts (Carrollton): I was nominated by the Councilor District, but I want to be relieved.

President Head: Part of the old Fourth District was put in the Third. We have not had a District meeting. I have been asked to have somebody nominate Dr. K. S. Hunt. I am willing to do it, if Doctor Simmons thinks I am in order.

Parliamentarian Simmons: The President is pretty nearly always in order. He certainly has his constitutional rights here, because nomination can come from any person on the floor for any office.

Dr. H. M. Fullilove (Athens): I second the nomination of Doctor Hunt.

President Head: Are there any other nominations? If not, I will instruct the Secretary to cast the unanimous vote for Dr. K. S. Hunt as Councilor for the Fourth District.

Secretary Bunce: I hereby cast the unanimous ballot for Dr. K. S. Hunt as Councilor for the Fourth District for a three-year term.

President Head: I declare Doctor Hunt elected.

Dr. O. H. Weaver (Macon): Dr. K. S. Hunt, whom you have selected, is at present

the Councilor for the Sixth District, which is our District.

President Head: The state twelve months ago had twelve congressional districts. The first of January the state had only ten. If it is necessary for the Sixth District to nominate a Councilor, I don't think it would be a bit of trouble to nominate somebody.

Dr. J. O. Elrod (Forsyth): As a member of the Sixth District, I nominate Dr. C. L. Ridley for Councilor for the Sixth District.

Dr. R. L. Miller (Waynesboro): I second the nomination of Doctor Ridley.

Dr. C. L. Ridley (Macon): I wish to nominate Dr. H. G. Weaver.

Doctor Weaver's nomination was seconded.

Ballots were cast.

Secretary Bunce: Mr. President, 89 votes were cast, of which Doctor Weaver received 49 and Doctor Ridley received 40. (Applause)

President Head: I declare Doctor Weaver elected as Councilor for the Sixth District.

I am satisfied there is one other District in the state that has two Councilors now living in the District. This is the new Tenth District, which has Doctor Fullilove and Dr. Joe Lewis of Augusta. It seems that up till now we have run this election for the Councilors all right. We will hear from the Parliamentarian.

Parliamentarian Simmons: The election you have just held was to take care of a vacancy that you made this morning by electing the Councilor of the Sixth District as the Councilor for the Fourth District. You had to elect someone to fill the unexpired term for the Councilor of the Sixth District.

Regarding the election of Councilors from those Districts in which there happen to be two because of the new congressional redistribution, the law that you introduced last year and passed this morning will automatically take care of that within the next two years by the election next year and the year after, after which time there will be only ten Councilors in the state. We did not wish to legislate any man out of office or push him out of office. We would just let him drop out when his term expired and no successor will be elected. We need not conform to the congressional territory until such time as your set-up of Councilors does conform to it.

President Head: Next is the selection of the meeting place for 1934.

Dr. William A. Mulherin (Augusta): Mr. President and Members of the Medical Asso-

ciation of Georgia: I have been asked on behalf of the Richmond County Medical Society and the good people of Augusta to extend to you a very cordial and very sincere invitation to hold your next meeting in Augusta. It will be our effort to endeavor to approach the entertainment that you have had here, which is establishing a high mark. Also I might mention in connection with this invitation that I was the General Chairman of the Committee on Entertainment when you met there last time, and I have been very severely criticized for having too much liquor. You had a good time there. We will cut that down, if necessary, if it is the wish of this Association. We can assure you that we will step down a little bit if you would like it. As you know, the old Savannah River there divides Augusta from South Carolina. All you have to do is get over on the other side and have all the 3.2 you want. I want to put that merely in a jocose way. We hope that the Association will meet with us next May in the city of Augusta. We promise you a good time, also a successful meeting as far as it lies within our power.

Dr. Richard Binion (Milledgeville): I move that Dr. Mulherin be made chairman of that committee this year, and that this Association cast a unanimous vote to meet in Augusta.

The motion was seconded, put to a vote and carried.

President Head: I wish to announce the appointment of the Committee on Economics and Public Relations:

Dr. C. W. Roberts, Atlanta, 5 years.

Dr. Dan Y. Sage, Atlanta, 4 years.

Dr. C. L. Ridley, Macon, 3 years.

Dr. William A. Mulherin, Augusta, 2 years.

Dr. R. M. Harbin, Rome, 1 year.

Mrs. J. Bonar White, Atlanta, as President of the Woman's Auxiliary, ex-officio member.

Secretary Bunce: I wish to read a telegram received from Dr. Charles C. Harrold, at Baltimore, Maryland: "Appreciate your kind greetings. Regret my absence. Hope to be home in June. Best wishes." (Applause)

President Head: Next is the installation of officers.

The newly elected officers were escorted to the platform.

President Head: Dr. Richardson, I hope you will have the support that I have had from the crowd. I am glad to install you as the President of the Medical Association of Georgia for the coming year.

The audience arose and applauded as President-Elect Richardson took the chair.

President Richardson: Doctor Head and Fellows: It is a great honor to be elected President of this Association. It is not only an honor; it is an obligation, and it is also, particularly, with me, a sacred trust. I trust you will pardon me for just a minute, in turning aside and telling you something of a very personal nature, in times like this, when emotions are naturally on the surface.

My father was a country doctor. He was a member of this Association for forty years, and he gave it some of the best service of his life. When this Association met in Macon more than twenty years ago, over at the old Hotel Lanier, before this hotel was built, it had been customary for a long time to elect the Presidents from the largest cities in the state. At that time the men from the rural districts decided that it was time for them to have a President, and they got together in caucus and selected three names, Doctor Dean of Dawson, Doctor McArthur of Cordele, and my father, from Montezuma. Doctor McArthur was the choice of that caucus, and he was elected President of this Association at that time.

A few years later ill health came along, and my father was never able to achieve what to him would have been the greatest honor of his life. But as the years passed on, he passed that ambition on to me. It was the greatest desire of his life that I should achieve the thing that he had missed. If he had lived just two years longer, he would have seen I think the greatest ambition of his life realized.

I say for that reason this to me is a very sacred trust, and I shall try to carry on in some measure as a tribute to his memory.

These are strenuous times in medicine. There are many problems confronting this organization. But they are not problems which cannot be worked out, with the loyal support of a body of men like this. I wish to make just this statement: That I believe that the practice of medicine is inherently a personal responsibility, and I take my stand with organized medicine and issue a challenge to any who will attempt to disrupt that personal contact which has so long been the measure of our service.

I thank you for the honor, and I promise you my very best efforts. (Applause)

We will now hear from Dr. C. L. Ayers, who has been elected President-Elect.

Dr. C. L. Ayers: Mr. President, Members of the Medical Association of Georgia: I am sure that this bunch is tired and wants

to get away, and I am not going to keep you, but I do want to express my thanks to my good friends, Grady Coker and Arthur Selman, for their kind words in presenting my name to this Association. I also want to express to this Association my genuine appreciation and gratitude for the confidence that you have expressed in me in the way of your vote, and I want to assure you that I will do everything in my power to maintain the high standard of efficiency that this Association has had for a number of years, and will be constantly on the lookout for anything that will benefit our doctors individually. I thank you. (Applause)

President Richardson: Dr. J. D. Applewhite, First Vice-President.

Dr. J. D. Applewhite: Mr. President and Members of the Association: This is as much a surprise to me as it is to anybody in the room. I have been a recipient of good things from this Association for fourteen years, and it will be my purpose this year to support the President, the President-Elect and the other officials of the Association, and try to make some contribution during this coming year. (Applause)

President Richardson: Dr. W. W. Turner, Second Vice-President.

Dr. W. W. Turner: Mr. President and Members of the Association: I can state, as well as Dr. Applewhite, that this is quite a surprise to me. I appreciate the honor that the Association has bestowed upon me, and I am going to try to do my dead level best to serve the Association in every way that my higher officials and officers demand of me. (Applause)

President Richardson: I want to introduce to you these newly elected Councilors: Doctor Thompson, First District; Doctor Redfearn, Second District; Doctor Patterson, Third District; Doctor Hunt, Fourth District; Doctor Weaver, Sixth District. I am sure with these men we are in good shape. (Applause)

Is there any unfinished business, Mr. Secretary?

Secretary Bunce: We have as unfinished business the election of nominees to submit to the Governor for appointment on the State Board of Health. The list which has been selected by the House of Delegates is as follows:

First District:

Dr. Cleveland Thompson, Millen.

Dr. W. H. Myers, Savannah.

It was moved, seconded, put to a vote and carried, that those names be accepted.

Second District:

Dr. C. K. Sharp, Arlington.

Dr. A. D. Little, Thomasville.

It was moved, seconded, put to a vote and carried, that those names be accepted.

Third District:

Dr. W. A. Coleman, Eastman.

Dr. F. M. Martin, Shellman.

Dr. J. C. Wall, Eastman.

Mr. R. C. Ellis, Americus.

It was moved, seconded, put to a vote and carried, that those names be accepted.

Fourth District:

Dr. E. R. Park, LaGrange.

Dr. M. M. Head, Zebulon.

Dr. R. B. Gilbert, Greenville.

It was moved, seconded, put to a vote and carried, that those names be accepted.

Fifth District:

Dr. A. G. Fort, Atlanta.

Dr. W. E. Barber, Atlanta.

Dr. D. Y. Sage, Atlanta.

Mr. R. F. Maddox, Atlanta.

It was moved, seconded, put to a vote and carried, that those names be accepted.

Sixth District:

Dr. Richard Binion, Milledgeville.

Dr. C. L. Ridley, Macon.

Dr. A. R. Rozar, Macon.

It was moved, seconded, put to a vote and carried, that those names be accepted.

Seventh District:

Dr. J. T. McCall, Rome.

Dr. P. O. Chaudron, Cedartown.

Dr. M. M. McCord, Rome.

It was moved, seconded, put to a vote and carried, that those names be accepted.

Eighth District:

Dr. W. F. Reavis, Waycross.

Dr. H. W. Clements, Adel.

Dr. H. M. Tolleson, Hahira.

It was moved, seconded, put to a vote and carried, that those names be accepted.

Ninth District:

Dr. L. C. Allen, Hoschton.

Dr. Grady N. Coker, Canton.

It was moved, seconded, put to a vote and carried, that those names be accepted.

Tenth District:

Dr. Linton Gerdine, Athens.

Dr. W. A. Mulherin, Augusta.

It was moved, seconded, put to a vote and carried, that those names be accepted.

President Richardson: It becomes my duty to appoint a committee to present those names, but I think Doctor Head should present the names he had in mind.

Ex-President Head: I had these men in mind, and had we done this a while ago it would have been my duty, but as ex-

president I am satisfied I still have the right to do it. I appoint as the members of this committee:

Dr. C. E. Waits, Atlanta.

Dr. J. O. Elrod, Forsyth.

Dr. C. H. Richardson, Macon.

President Richardson: You have heard the appointment of this committee to present these names to the Governor. I am sure it does not require a motion.

I think this concludes our business. Has anyone anything to say before we adjourn? If not, I declare the Eighty-Fourth Annual Session of the Medical Association of Georgia adjourned.

The meeting adjourned at 12:45 o'clock.

ALLEN H. BUNCE, M.D.,

Secretary-Treasurer.

N. B. Please notify the Secretary immediately of any errors or omissions in these minutes of the general meetings of the Association at the Eighty-Fourth Annual Session.

THE DIAGNOSIS AND TREATMENT OF SYPHILIS*

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*Director U. S. Public Health Service Clinic,
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Syphilis is a preventable, controllable, and curable disease provided the early cases are recognized and receive prompt and adequate treatment. The infection may be compared to a fire, which, if discovered at the onset is readily brought under control by a few, well-directed, energetic measures. On the other hand, if undiscovered it rages unchecked, the entire structure is irreparably damaged and adjoining property endangered. The same is true of syphilis. Uncovered and properly treated in the early stages the infection may be arrested before serious damage has been done to vital organs but when permitted to gain headway and reach brain and cord pathology develops which can never be repaired, even by the best syphilologists and specialists in the country. New infections take place, congenital syphilis occurs, and even when uncovered, in these later stages, its progress cannot be checked by all that modern therapy has to offer.

The diagnosis of syphilis, in the majority of cases, presents no great difficulties with the aid of modern laboratory tests and our

knowledge of the clinical aspects of the disease. The treatment is fairly well standardized, the therapeutic agents employed have been found effective, and the technique of administering the arsphenamines and heavy metals is no more difficult than many of the other procedures the practitioner is called upon to perform daily. Yet, with all these advantages, too many physicians still believe that all syphilis belongs to the specialist. This is true of the late, neuro, and congenital cases but it is not true of the early cases, in which the diagnosis is comparatively simple and there are, as a rule, no contra-indications to complicate treatment as the disease has not existed long enough to do any visceral damage. It would be an ideal arrangement if all syphilis could be treated by specialists in large medical centers but this is obviously as impossible as to have all surgery done in large medical centers.

The whole secret of successful control lies in the recognition and adequate treatment of the early cases, for in this way we not only prevent new infections but the later manifestations of the disease in the patient, and congenital cases. The general practitioner is the most important factor in this program because it is he who sees many of the patients in the early stages of their infection, when treatment will be most effective. Stokes has expressed the role of the general practitioner as follows:

"The responsibility for the modern control of the infectiousness of syphilis, and therefore its spread, is not in the hands of the church with its preaching, the law with its mandates, or the laboratory with its drugs, but is to be met or ignored by the every-day doctor."¹

1. *Classification.*

Before discussing the diagnosis and treatment of syphilis, we should agree upon some general classification to avoid confusion. The following is simple and practicable and will serve as a basis for this discussion.

- A. Early. (Primary and Secondary)
- B. Early-Latent. (Duration of Infection less than 4 years)
- C. Late. (Duration of Infection over 4 years)
- D. Neuro. (Showing clinical and lab-

*Read before the Medical Association of Georgia, Macon, Georgia, May 10, 1933. Invited guest.

oratory manifestations of central nervous system involvement)

E. Congenital. (Showing clinical or laboratory evidence of the disease)

II. *Early Syphilis.*

A. *Primary.*

1. *Diagnosis.*

In primary syphilis the diagnosis can only be made by laboratory methods—the dark-field and Wassermann. It cannot be made, with any degree of certainty, from the gross appearance of the lesion, from any text-book description, or the patient's history any more than the physician can determine a patient's temperature without the aid of a clinical thermometer. The physician who eliminates a diagnosis of chancre because the lesions are multiple, because they are not indurated, because of the history of incubation, or depends upon the patient's statement that he has not exposed himself, is inviting trouble.

There can be no single description of a chancre because its appearance may change from day to day. The initial lesion, when first seen, may appear only as a small denuded surface on the mucous membrane or glands, or a small nick in the skin. There is, also, the possibility of a "mixed infection" and a typical text-book appearing chancroid may be grafted upon a chancre, while other organisms may also be found.

All lesions on the external genitalia must be regarded as suspicious and the patient's own statement as to the probable cause should be ignored and darkfield and Wassermann examinations made. All lesions on the face not otherwise accounted for, especially around the lips and corners of the nose and mouth, should also be regarded as suspicious and darkfield and Wassermann tests made to preclude the possibility of syphilis.

The chancre must be differentiated from chancroid, cancer, herpes, and scabies. Of these, chancroid is the most often confused with syphilis and herein lies a grave danger because many physicians eliminate the possibility of syphilis and make a diagnosis of chancroid on the evidence of one negative darkfield and blood test. A negative darkfield, or series of negative darkfields does not eliminate the possibility of syphilis, as

the patient frequently uses some dusting powder or antiseptic on the lesion before consulting a physician, or in the process of healing the treponema may have disappeared.

The physician must remember that the Wassermann does not become positive until 10 or 14 days after the appearance of the lesion and sometimes later. No patient should be assured that his infection is not syphilis until after at least six months observation, during which time the Wassermann should be repeated at weekly intervals for the first six weeks and thereafter once a month. If, at the end of this time, all darkfield and serological tests have been negative and no clinical evidence has appeared the physician might advise his patient that he probably did not have syphilis. To attempt to establish the diagnosis of chancroid by seeking for the Ducrey's bacillus, either by a smear or even by cultural methods, presents so many technical difficulties that it is impracticable.

Carcinoma of the penis is fairly common but the age of the patient, history of the lesion, and negative laboratory tests for syphilis will guide the physician.

Herpes and scabies may be mistaken for a chancre or vice-versa but here, again, the darkfield, serological tests, and observation tell the story.

The clinician must remember that few women can give a history of a primary lesion. Chancre on the external genitalia is comparatively uncommon, the lesion most often being found on the cervix, where it does not conform to the usual description of a chancre but is seen merely as an erosion around the cervical canal, resembling an endo-cervicitis. The darkfield on such a lesion is frequently unsatisfactory because of the presence of other bacteria.

In rural districts, where darkfield facilities are not available, it is possible for the physician to collect and forward serum from the lesion to the nearest laboratory. The specimen is taken as follows: The lesion should be cleaned by swabbing with a normal saline solution and dried with cotton pledgets. The surrounding area is then gently massaged with the gloved fingers to express some of the exudate, which is col-

lected in a small, sterile, capillary tube, open at one end. The open end is then sealed in a flame and the specimen is ready for mailing.

2. *Treatment Primary Syphilis.*

a. *Local treatment.*

Once the diagnosis of primary syphilis is established, either by a positive darkfield or a positive serology, a complete physical examination should be made and if there are no contra-indications energetic treatment should be instituted at once, as every hour counts. All serological examinations should be double checked; that is, both the hemolytic and precipitation methods should be used and all positive reports should be rechecked in the same way to avoid possibility of error.

Local treatment to the lesion consists of the usual antiseptic washes or powders, though ordinary cleanliness will suffice in most cases. If the lesion is hidden by the prepuce irrigation with a blunt nosed syringe of a warm 1 to 3,000 bichloride solution will be found most effective. This should be followed by the patient's suspending the penis in a Mason jar filled with the same solution.

It is never advisable to do a dorsal slit except when the lesion obstructs the urethra. Once an infection is started in the loose cellular tissue of the penis it becomes a serious surgical problem. On three occasions we have found it necessary to amputate the entire organ in patients who had a dorsal slit before coming to our clinic and we have treated at least a dozen other cases who suffered agony for weeks, which could have been avoided if a more conservative course had been followed.

All treatment is based on the physical examination and therefore this examination should be made carefully. The physician should not only seek for clinical evidence of syphilis but must also make every effort to bring to light evidence of any other disease such as tuberculosis, heart and kidney lesions, etc., which might alter or modify the treatment program. In other words, the physician must take into consideration not only the syphilitic infection but the individual patient's physical equipment also. Since most cases of early syphilis occur in the young adult, contra-indications to treatment are the exception and the treatment schedule can usually be followed.

An icterus index determination should be requested with every Wassermann report. The test is comparatively simple and by its indication of the liver function is a valuable

guide to arsphenamine therapy. A complete urine analysis, both chemical and microscopical, should also be made.

The physician, at this time, should make the patient understand that there is no short cut to the cure of his disease and that this is the one and only time in his entire life when he may be reasonably assured that he can overcome his infection by prompt, continuous, and adequate treatment. The physician himself must realize that even though the Wassermann is negative and the darkfield positive (which occurs in about 40 per cent of the cases) the patient has had syphilis, which is a systemic infection, not only since the appearance of the chancre but within a few hours after exposure and that the treponema are not localized in the chancre alone but have invaded practically every organ in the patient's body.

b. *Intravenous therapy in early syphilis.*

It is impractical for most general practitioners to use arsphenamine and therefore I should advise neo-arsphenamine. The first dose of neo-arsphenamine should be 0.2 grams to test the patient's tolerance and the second dose, 0.4 grams may be given 3 days later. If the patient tolerates the drug and no reactions have occurred, he should receive thereafter 0.6 grams of neo at weekly intervals for 8 weeks. It is unnecessary to exceed the 0.6 gram dose.

The patient should be instructed to take a cathartic (preferably magnesium sulphate) the night before he is to receive his arsenical injection; to eat a light breakfast and no food for six hours before or after his injection.

Before each dose of neo-arsphenamine is administered the physician should question and inspect his patient carefully to detect any early symptoms of arsenic intolerance. If the patient complains of itching or shows a redness of the skin which cannot otherwise be accounted for it is well for the physician to delay the injection until the condition has cleared up and then proceed with caution. A slight erythema, seen today, may be the forerunner of a generalized ex-foliate dermatitis in a few days and as 5 per cent of such cases terminate fatally, it is always well to investigate trivial symptoms. Here again prompt action is necessary and the physician's best weapon is sodium thiosulphate.

In preparing the solutions and injecting the drug, the physician must follow minutely the manufacturer's instructions. He should use freshly distilled water or saline solution, whichever the manufacturer recommends and inject the drug very slowly into the vein, using a 22 gauge needle. It is extremely im-

portant to avoid infiltration of tissue as a patient who has gone through the agony of an infiltrated arm can rarely be persuaded to take further treatment.

c. *Intra-muscular therapy in early syphilis.*

Mercury or bismuth should be given at the same time the patient is receiving neo-arsphenamine. The average patient is prone to discontinue treatment at the least provocation and it is advisable for the physician, in these early cases, to give as much treatment as possible while the patient remains under his care.

I would recommend that only soluble preparations of either mercury or bismuth be used in the early stages. In addition to the neo, the patient should receive a minimum of 2 intramuscular injections per week, which should be continued while the patient is resting between arsenical courses.

Every physician should learn the proper technique of intra-muscular injection and avoid subjecting the patient to unnecessary pain. Even in the hands of experts a certain amount of pain and discomfort is unavoidable but this is increased by incorrect technique. A sharp needle, with a long bevel, should be used and driven deep into the muscle. It is always better to insert the needle before the syringe is attached and see that the point has not penetrated a vein or reached the proximity of a nerve fiber before the injection is completed.

If this has happened, the needle should be withdrawn and a second attempt made at a new site. To inject the solution directly into a small venule increases the possibility of abscess and emboli. If the solution is injected near a nerve fiber it causes excruciating pain and may cause a temporary paralysis of the entire leg. Such an accident will cause many patients to discontinue treatment entirely.

A rustless steel needle should be used, $1\frac{1}{2}$ or 2 inches in length, preferably number 19 or 20 gauge, that will not break at the neck. One has only to experience the embarrassment of having a needle break and slip under the skin to realize the importance of using good needles. When this does occur there is only one thing to do and that is to take immediate steps to recover the needle. Do not permit the patient to walk around but enlarge the puncture under a local anesthetic and attempt to recover the needle with a blunt forceps. If the patient is permitted to walk about the needle disappears in the deep muscle, where it can only be located by x-ray and recovered by surgical measures.

If the injection is properly made, there should be only temporary pain and no "cobblestones" should form at the sites of injections. The so-called "cobblestones" are nothing more or less than a fibrosis which prevents absorption of the drug and the patient receives very little benefit from such injections.

d. *The iodides in early syphilis.*

The iodides should be given in conjunction with the neo-arsphenamine and bismuth or mercury because this drug absorbs the inflammatory processes that wall off the invading organism, and prevents encapsulation. Potassium iodide is the drug of choice and should be given as a saturated solution, starting at 10 gts. t.i.d. in a glass of milk after meals. The patient increases one drop each dose until he reaches 60 drops, then decreases one drop each dose to ten drops unless some gastric distress develops, when the drug must be discontinued for the time being. The iodides should not be given to any patient having evidence of tuberculosis.

e. *Treatment schedule in early syphilis.*

Each course of treatment should consist of 10 doses of neo and 20 doses of mercury or bismuth. After the 10th dose of neo, the patient is permitted a month's rest from arsenic but the heavy metal is continued. In a year's time the patient should receive approximately 40 doses of neo-arsphenamine and 100 doses of mercury or bismuth. The patient can take iodides one month and rest the next.

A check-up Wassermann and icterus index should be made at the beginning of each new course of arsenic, and a urine analysis, both chemical and microscopical, once a month throughout the year's treatment. If casts or albumin appear in the urine, all treatment must be discontinued until the urine is negative.

A spinal puncture should be made at the end of the year's treatment, and also an examination of the eye-grounds and x-ray of the heart. If the patient has received the treatment outlined and the physical and laboratory examinations are all negative half the battle is won.

In the second year, even though all examinations are negative, about half the above amount of treatment should be given as a precautionary measure. This is followed by a second spinal fluid examination, eye-grounds, x-ray, and a careful neurological examination. If everything is negative and no other clinical manifestations have appeared the patient may be kept under observation

only, with a blood test every three months and physical check-up once a year.

If the patient has a relapse, the entire program must be repeated. If spinal fluid, eye-grounds, or x-ray show any changes consultation and special treatment are indicated.

f. Reactions.

Reactions may be divided into two classes: immediate and delayed. The immediate reaction occurs during the injection of the neo-arsphenamine or immediately after. The most important of these is the nitritoid reaction, which may be mild or severe, and which is characterized by flushing of the face, choking cough, dyspnea, and palpitation. Vomiting may occur if the patient's stomach is not empty. In severe cases we may find oedema of the lips, tongue, and face, with syncope and thready pulse. The patients also complain of a severe, cramp-like pain in the region of the lower muscles. The causes are usually idiosyncrasy on the part of the patient, improper mixing of the solution, or too rapid injection.

Treatment consists of the sub-cutaneous injection of 1 c.c. of a 1:1,000 adrenalin solution, which may be repeated at the end of 30 minutes if the patient has not recovered. If the reaction is due to idiosyncrasy it would be best to give the patient silver arsphenamine.

Other minor reactions can be prevented by the proper preparation of the patient and proper technique of intravenous medication.

The minor delayed reactions occur from four to 12 hours after treatment and are characterized by malaise, headache, nausea, vomiting, and diarrhea. Occasionally there is a rise in temperature and a skin eruption, usually urticarial, macular, or scarlatinaform. Such a condition is evidence of some arsenical intoxication and the physician must proceed with caution. Treatment is symptomatic.

More serious reactions are jaundice, dermatitis, hemorrhagic encephalitis, and purpura. When these conditions develop consultation is imperative as the treatment requires hospitalization and special attention.

The Herxheimer reaction is an exacerbation of the signs and symptoms in the early stages of treatment that must be carefully guarded against in the treatment of late syphilis involving delicate structure. Here, again, consultation is indicated before treatment is continued.³

A more detailed account of these reactions will be found in "The Management of Syphilis in General Practice," a Government pamphlet compiled by the foremost syphilol-

ogists, which will be forwarded to any physician on request.

There is no substitute for common sense and judgment. The physician should always be conservative, take every precaution, and throw every safeguard around the patient. He should immediately discontinue treatment and seek consultation when things begin to go wrong.

I should like to emphasize again the importance of sparing the patient all unnecessary pain and discomfort. To take treatment for syphilis, under the best conditions, taxes the morale of the strongest patient. A physician may have much knowledge concerning the diagnosis and treatment of syphilis but if he cannot win and retain the confidence of his patient, the knowledge and skill is worthless because it will never be applied. I am firmly convinced that the reason we have so many cases of late syphilis is because these cases did not receive proper treatment in the early stages of their infection. One reason for this lack of early treatment is that physicians have not paid sufficient attention to making treatment as painless as possible.

B. Secondary syphilis.

1. Diagnosis.

About six weeks after the appearance of the chancre secondary manifestations as skin eruption, alopecia, and mucous patches may appear, and, some time later, condylomata. The patient may complain of headache, neuralgia, and even show a rise in body temperature. The lymph glands are swollen and sometimes tender. The liver may be enlarged, the spleen palpable, and iritis may be present. Any one, or any combination of these symptoms may be found in the same patient. On the other hand, some patients show none of these symptoms and escape the secondary manifestations entirely.

In others the rash may be so slight that it escapes the patient's notice and can only be detected in a strong natural light over the sides of the chest wall and inner surfaces of the arms where the skin is thin. In some instances an eruption not discernable under direct scrutiny may be easily observed when viewed from an angle.

According to Hazen,³ the macular type of secondary eruption is found in about 50 per cent of the white group and 15 per cent of the colored when secondary eruptions occur. The macules are flat, of a pale pink color, which later becomes brownish, and vary in size from $\frac{1}{4}$ inches to $\frac{3}{4}$ inches in

diameter. The eruption predominates upon the body and limbs.

Among the non-specific skin infections most often confused with syphilis, pityriasis rosea is the most important. The distinguishing points are that the lesions in pityriasis rosea are oval, instead of round, and the long axis of the lesions are parallel with the direction of the ribs. The lesions, which are usually scaly tend to clear up in the center, which has a yellowish tinge, while the borders are of a bright, rosy color.

We may also find a papular, pustular, follicular, or annular syphilide, or certain combination of these. However, since the average clinician is not a dermatologist he must depend upon the patient's history and the serological findings, which fortunately, in this stage, are positive in 95 per cent of the cases.

Smallpox is also sometimes confused with syphilis but a careful history plus laboratory evidence is usually sufficient to clear the diagnosis. However, the physician must remember that the patient may have syphilis with a positive Wassermann and also a smallpox eruption.

Mucous patches on the mucus membranes, tonsils, and tongue oftentimes accompanied by hoarseness are common in the secondary stage of the disease.

Alopecia may be absent or pronounced in the white group but is comparatively rare in the negro.

Condylomata may appear at this time but are usually of a later development than the other secondary manifestations.

It is in this stage that the spinal fluid frequently becomes positive, although the resulting neurological symptoms may not appear until years later. However, if treatment is instituted during this period many of the positive spinal fluid cases will become negative at the end of the first year's treatment. This observation is most important because it definitely proves that the best way to prevent late syphilis is by energetic treatment in the early stages.

2. *Treatment in secondary syphilis.*

In the secondary stage the patient is at the height of his infectivity and he must be warned to protect others. While there is

no danger of infection under ordinary conditions all intimate contact must be avoided and other members of the family must be protected by the patient's using his own dishes and toilet articles. Treatment is essentially the same as outlined for the primary group.

III. *Early latent cases.*

A. *Diagnosis.*

The early-latent group includes patients past the primary and secondary stages who have had their infection less than 4 years and in whom no late or nervous symptoms have appeared. Such patients usually have no evidence of the disease except a positive Wassermann, and even the Wassermann may be negative due to previous treatment. In such cases, it is well for the physician to inquire closely into the evidence on which the original diagnosis was established and the amount of treatment the patient may have received. If it happens, as it will in many instances, that the patient has received irregular and inadequate treatment, the physician is justified in advising further treatment to prevent the possibility of later manifestations and relapses.

Some cases of muco-cutaneous relapses are found in this group.

B. *Treatment early latent cases.*

Up to and including this time the patient still has a fair chance to overcome his infection, or at least to arrest the progress of his disease, although his chances are now not as good as if treatment had begun earlier. In treating this group the physician may follow the general outline previously given, with whatever modifications the individual case may demand.

IV. *Late syphilis.*

A. *Diagnosis.*

In the late syphilis group are classified patients with no neurological symptoms, who have had their infection more than 4 years. Although the laboratory reports may be negative due to the age of infection or previous treatment and oftentimes clinical examination is negative, these patients frequently present symptoms of the disease. Here we find early cardio-vascular cases, aortitis, hemiplegia, and gummatous changes.

A thorough examination of late syphilis patients requires consultation service and such additional laboratory aids as the fluoroscope, x-ray, eye-ground examinations, etc.

B. *Treatment of late syphilis.*

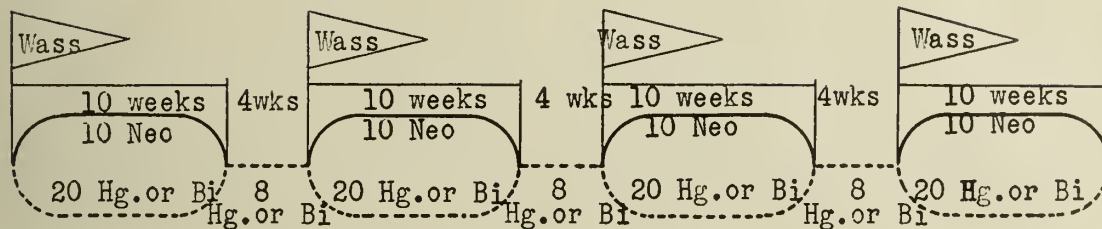
Treatment in this group is dependent upon the physical findings. At this stage pathological changes have usually taken place in the internal organs and the physician must

TREATMENT SCHEDULE.

— Neo.

Early Syphilis.

----- Hg. or Bi.



understand that there is no longer a possibility of eradicating the disease but be satisfied if he can prevent further damage by conservative treatment. Some of these patients do better without treatment than with and a fatal termination sometimes occurs when injudicious treatment is instituted. If arsenic is used at all it must be given with great caution and the patient carefully watched between each dose. Here conservatism is the watchword and woe betide the patient in this group who is so unfortunate as to fall into the hands of a young enthusiast.

V. *Neurosyphilis.*A. *Diagnosis.*

In the neuro group diagnosis is dependent upon the case history, cardinal neurological findings such as changes in reflexes, eyes, gait, speech and decorum, and such laboratory evidence as a positive spinal fluid, increased cell count, etc. Here, again, accurate diagnosis requires the services of special consultants and it is best for the general practitioner to refer these cases to his more qualified colleague.

B. *Treatment neurosyphilis.*

Treatment is entirely dependent upon the patient's age, general condition, the neurological findings and other factors. Such treatment can only be carried out by the specialist with hospital or institutional care.

VI. *Congenital Syphilis.*A. *Diagnosis.*

In congenital syphilis the physical signs are the saddle nose, Hutchison teeth, iritis, deafness, changes in bones, and retarded development, both mental and physical. In many cases, however, all of these signs are absent and a positive serology is the only evidence of the disease. It is fortunate that many pregnancies in the untreated female terminate by abortion or miscarriage since treatment of congenital cases is not always satisfactory. However, if syphilis in the mother is detected early in her pregnancy and treatment measures instituted many of these

children show no evidence of the disease at birth. Some continue to show no evidence through life, while others are never robust and frequently have little or no immunity to the common diseases of childhood.

B. *Treatment congenital syphilis.*

The congenital syphilis cases should also be referred by the general practitioner to the syphilologist and pediatrician for treatment.

VII. *Conclusions.*

1. Syphilis, in the early stages, may be successfully diagnosed and treated by the general practitioner.

2. Recognition and adequate treatment of early cases is the most important factor in the syphilis control program, in which the general practitioner should assume the major responsibility.

3. Diagnosis of primary lesions can only be made by laboratory methods and not upon the appearance of the lesion.

4. In the first year of infection the patient should receive a minimum of 40 injections of neo-arsphenamines and 100 injections of mercury or bismuth.

5. Proper technique is important and the patient should be spared all unnecessary pain and discomfort to avoid breaking down his morale.

6. The early latent group (cases of less than 4 years duration) is also important because there is still the possibility of overcoming or arresting the infection.

7. Late, neuro, and congenital cases should be referred to the specialist for treatment.

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CORONARY DISEASE*

EVERT A. BANCKER, JR., M.D.
Atlanta

Coronary artery disease is rapidly assuming great importance as a cause of death after the age of forty, as is evidenced by the fact that the American Heart Association chose coronary disease for the main subject of their program at their annual meeting last year. The increasing frequency of this disease combined with the fact that it kills or disables its victims in the very prime of life as well as in old age probably accounts for the widespread interest in it at the present time.

White and Jones¹ found that 37 per cent of 2,314 patients with organic heart disease in New England were diagnosed clinically as having some grade of coronary disease and that one-half of them were complicating other types of heart disease, mainly the hypertensive type.

Etiology

Poor cardiovascular heredity is the most important single factor involved in the etiology of this disease. The anabolic processes of senile softening, thickening and subsequent calcification (arteriosclerosis) are the events leading up to the tragedy in many cases. Diabetes mellitus, syphilis and focal infection are also concerned as etiologic agents.

Blotner² reported a necropsy study of seventy-seven fatal cases of diabetes mellitus, thirty-five of which or 45 per cent showed marked disease of the coronary arteries while eight patients or 10 per cent died of cardiac infarction. Levine³ in a study of 145 patients with coronary thrombosis found that 24 per cent or thirty-five had diabetes. Parsonet and Hyman⁴ found twenty-two patients with diabetes in a group of eighty-nine patients with coronary thrombosis. Seven of these twenty-two suffered severe coronary attacks following the administration of the initial dose of insulin.

Coronary disease is rare in the tropics and in the negro race. Paullin⁵, in a study of 176 cases of cardiovascular syphilis in the Negro, reported that only .45 per cent developed coronary thrombosis. The age incidence in a collection of 864 cases of coronary disease diagnosed clinically in New England was reported by White and Jones.⁶ The greatest incidence was between 60 and 70, while 87.7 per cent occurred after the age of 50.

Symptoms and Signs

The symptoms of coronary disease are baffling because their production depends upon many different factors, among which may be mentioned the size and distribution of the artery affected, the degree of obstruction and the suddenness with which the occlusion occurs.

Symptomatically we may have three types of coronary disease, acute coronary thrombosis, subacute or partial coronary obstruction and chronic coronary disease. The symptom complex, angina pectoris, is the result of chronic coronary disease.

There is no typical clinical picture of coronary disease. The three most frequent and important symptoms are pain in the chest, dyspnea and palpitation. The attack may come on in the middle of the night and is usually initiated by sudden, terrible, oppressive, substernal, precordial or epigastric pain. If the right coronary artery is the site of the thrombosis, pain may be entirely absent as demonstrated at necropsy by Brown⁷, Wassermann and others. Dyspnea is also less marked if the right coronary artery is the one occluded. Extreme weakness and a fear of impending death are experienced by most of the sufferers.

During the attack the patient is in a variable state of shock. The skin is cold and clammy and may show a grayish tinge. The heart sounds are weak and distant and tic-tac rhythm may occur. An apical systolic murmur may be heard due to functional mitral regurgitation. The radial pulse is weak and the rate is usually between 100 and 120 per minute.

A high grade of heart block is present if a bradycardia is found. Premature contractions, auricular fibrillation, paroxysmal tachycardia and intraventricular block are of frequent occurrence. The blood pressure may be normal at the onset of the attack but when cardiac infarction occurs a sharp fall in the systolic pressure results. If hypertension is present, a daily variation in the blood pressure occurs.

A fever from 99 to 101 degrees and a polymorphonuclear leukocytosis from 10,000 to 30,000 may be present dependent upon the extent of the infarct. A localized, evanescent, pericardial friction rub may be heard if the infarct is on the anterior wall of the heart. Electrocardiograms are of great importance not only in helping to establish the diagnosis but also in following the progress of the disease. They enable one to offer a more certain prognosis. A dis-

*Read before the Fulton County Medical Society, Atlanta, Georgia, August 4, 1932.

cussion of the detailed information furnished by electrocardiograms is purposely omitted.

Differential Diagnosis

Peptic Ulcer. In differentiating peptic ulcer from acute coronary disease the following data seem of importance. Definite secondary anemia in young persons associated with gastric disturbance, high gastric acidity, recurrent local pain and abdominal tenderness will justify the institution of medical treatment under a tentative diagnosis of peptic ulcer. Gross gastric hemorrhage or blood-tinged vomitus, is a corroborative sign of value when present. The deformity of the duodenal cap and the lengthened retention period constitute the roentgen-ray evidence of peptic ulcer. Duodenal ulcers well removed from the pyloric ring may show a rapid emptying time.

Some ulcers are "silent ulcers" and go undiagnosed until perforation occurs when they may easily be confused with coronary disease. The symptoms of acute perforation into the free peritoneal cavity are those of sudden, severe epigastric pain and abrupt surgical shock succeeded by symptoms and signs of general peritonitis, all of which may simulate acute coronary disease except the boardlike rigidity of the abdominal muscles and the muscle spasm induced by palpation.

Acute Appendicitis. The symptoms and signs of acute appendicitis are well known and could hardly be confused with acute coronary disease except in the early stage when the pain is generalized over the epigastrium. Appendicitis occurs commonly in children and young adults. They often give a history of repeated attacks of pain in the right lower quadrant.

Acute Cholecystitis. The age incidence of acute cholecystitis and acute coronary disease is practically the same. Cholecystitis is three times more common in women than it is in men. This is an important differential point as coronary disease is more common in men. A history of flatulence, repeated attacks of right upper quadrant pain radiating through to the back and up to the shoulders, recurrent biliousness, light-colored stools and intolerance for greasy food, point to disease of the gallbladder. The Graham-Cole visualization test of gallbladder efficiency is of great value in the majority of cases if the proper technic is observed. The vomiting of bile is of significance as a diagnostic aid.

Acute Intestinal Obstruction. In general, acute intestinal obstruction is characterized by severe, paroxysmal, colicky abdominal pain which soon becomes continuous. There

is vomiting of stomach contents, bile and ultimately of fecal material. The obstinate constipation is often preceded by evacuations from that portion of the bowel lying below the point of obstruction. In acute intersusception there is a characteristic bloody dysentery. Tenesmus without bowel discharges is present in some cases of volvulus. If the obstruction involves the colon there is less vomiting but great abdominal distention. The higher the obstruction the greater the indicanuria and the earlier the urinary suppression.

The occurrence of hiccups should make one think of a high intestinal obstruction.

Acute Hemorrhagic Pancreatitis. This tragic condition usually goes undiagnosed until the exploratory operation. The symptoms resemble coronary disease, with a sudden onset of excruciating abdominal pain, vomiting and collapse. A fixed tumor may be present. There is usually free fat in the stool and the urine may show leucin and tyrosin. These patients give a history of chronic dyspepsia with a loss of weight over a considerable period of time. The skin is brown and mild jaundice may appear as this condition is frequently accompanied by chronic cholecystitis. Recovery from this disease is rare.

Treatment

A person in an attack of acute coronary thrombosis is approaching a state of collapse. Pain is the chief symptom and must be relieved by morphine, one-fourth or one-half a grain every two hours if necessary.

Dextrose, 100 cc. of a 50 per cent solution, or normal saline solution should be given intravenously. If the patient has diabetes mellitus, it is doubly important to give the dextrose as soon as possible because a sudden lowering of the blood sugar by insulin injection has been known to initiate an attack of coronary thrombosis.

Many drugs have been used in an effort to dilate the coronary arteries and produce an increased rate of coronary blood flow. Smith^a in experiments upon the isolated heart of the rabbit found that euphyllin increased the rate of coronary flow from 40 to 90 per cent while theophylline or theocin increased it from 20 to 45 per cent. One of these drugs should be used for two or three days but if improvement is not noted their continuance is not worth while.

If heart block in any form is present, barium chloride should be given in 2-grain doses every four hours until improvement is noted. Quinidine or digitalis should be

used if ventricular paroxysmal tachycardia or auricular fibrillation should develop.

If the blood pressure is found to be low, nitroglycerine should not be used. It may be used with slight benefit in some cases if the blood pressure is high.

After the acute stage of coronary thrombosis, congestive heart failure is frequent as a result of cardiac infarction. Digitalis should be used at this stage, care being taken to avoid full digitalization as the decompensation is usually a temporary affair and strong contractions of the heart may cause rupture.

The subsequent treatment of coronary thrombosis consists of rest in bed for at least two months, a basal diet, careful regulation of the bowels, the discontinuance or reduction of tobacco and excessive use of stimulants and the eradication of emotional excitement and worry from the environment. If syphilis is present as an etiologic agent, the patient should receive repeated courses of mixed treatment and bismuth injections over a period of years. The arsenicals should be avoided.

Prognosis

The prognosis of coronary heart disease is variable. Most patients survive the immediate attack, about 50 per cent die as a result of the first attack while the other 50 per cent live for a variable number of years.⁹ In a study of 287 cases of coronary thrombosis, Conner and Holt¹⁰ reported a first attack mortality of 16.2 per cent. The prognosis has been said to stand in a rough manner in inverse ratio to the age of the patient. The greater incidence of syphilis and cardiac strain between 40 and 55 years of age must influence the prognosis.

Prevention

In spite of the fact that heart disease is now the chief cause of death in the United States, very little research has been directed toward its prevention. As every case of heart disease has a potential coronary factor, our problem is a stupendous one.

Stroud¹¹ suggests "that individuals are born in certain families with hyperirritable vasomotor systems which will rapidly develop physiologic and pathologic changes if subjected to focal and general infections, frequent emotional upsets, overstimulation, prolonged physical effort and obesity." By taking careful family histories we may identify these individuals so that they may be protected from the above "coronary factors."

Houston¹² states that angina pectoris, coronary occlusion and essential hypertension are unknown in China because the Chinese lack the "spasmogenic aptitude" which is so

common in our life. On the other hand Levine and Brown¹³ believe that "hypermental tension" is only of minor importance in coronary disease.

The prevention of heart disorders in childhood will contribute toward reducing the high death rate at all ages. Washburn¹⁴ states that between 25 and 30 per cent of all cardiac deaths are attributable to rheumatic fever. Rheumatic endocarditis may be prevented by the more intelligent handling of the focal infections of childhood, remembering that rheumatic fever is contagious, treating patients with rheumatic arthritis or chorea more carefully, and treating respiratory tract infections more seriously.

It is high time that a long campaign be launched against heart disease, especially heart disorders in childhood, in the hope that the national death rate from heart disease will be greatly reduced.

Summary of Cases

In the past four years I have treated ten patients with coronary disease in some form. The youngest patient was 48 and the oldest 65, the average age of the group being 55. Two of the patients were merchants, two were electrical engineers, and two were business men. One patient was a printer and one was a school teacher. One was a cotton broker and one was in the lumber business.

All in the series had some degree of arteriosclerosis. Four patients and hypertension and three suffered nephritis. There was no evidence of diabetes mellitus in this group. The highest blood pressure during the acute attack was 110/80 and the lowest was 80/60, the average for the group being 95/65.

The highest leukocyte count during the attack of acute pain was 16,000 and the lowest was 8,000, the average for the group being 11,200. In all cases electrocardiograms gave definite evidence of coronary involvement and in those patients who recovered, subsequent tracings showed evidence of improvement.

One patient died 30 minutes after the onset of the acute attack. One died in 3 days, one in 6 days, one in 2 weeks, one in 1 month and one in 6 weeks after the initial attack. Four patients are living today.

Summary

The modern clinical conception of coronary disease is given.

A review of the pertinent literature is recorded.

The prevention of coronary disease is stressed.

Ten cases of coronary disease seen in private practice are reported.

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ANEMIA OF PREGNANCY*

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Any of the usual causes of anemia may give rise to anemia in pregnancy. Syphilis, sepsis and, in the south, hookworm disease may be singled out for mention in this respect. But there are also anemias which develop as a result of pregnancy, progress with it, and disappear after delivery; the disappearance is sometimes slow, sometimes rapid, but in all cases definite, unless another pregnancy follows so soon as to overlap the effects on the blood of the previous one, or unless in the grave types, the patient succumbs to the anemia before the birth or in the puerperium.

Two distinct types of anemia are recognized as arising from pregnancy, and a third type has recently been described. In the one type, the blood picture is that of secondary anemia; in the second it resembles closely, but not completely, that of pernicious anemia; in the third type, three cases of which were recorded last year by M. B. Strauss, the blood picture is that of chlorosis. Whether the secondary and pernicious types are distinct throughout their course, or whether the pernicious type, which is rare, represents the final evolution of a particularly severe neglected anemia of the secondary type, is not known. Some investigators hold the one view, some the other; the greater weight of opinion seems to be for the theory that the origin and course of each type are distinct from those of the other. It is, however, true that the pernicious type of anemia of pregnancy has never yet been seen in its early stage, so that it is impossible to state decisively that it does not develop out of the milder form.

In the textbooks the statement still stands that an increased red cell count and an in-

creased hemoglobin percentage are the rule in pregnancy. But this statement does not seem to be borne out by recent investigations. A mild degree of anemia, with the blood pictures of secondary anemia, appears, on the contrary, to be the rule in pregnancy. So commonly is such an anemia encountered in otherwise healthy pregnant women that the appellation "physiologic" has been applied to it.

This condition is not found only in women of the poorer classes, whose diet is restricted by economic considerations, or in women living in the congested portions of large cities. It is not found only in women worn down by repeated childbearing; it develops also in primiparas. "The majority of women when pregnant," says Galloway,¹ "develop anemia." Galloway's opinion was formed from his findings in a consecutive series of 382 private patients living in healthy surroundings in the North Shore suburbs of Chicago. He was able to observe these patients throughout pregnancy. He found that in the first three months the average hemoglobin percentage for the group was 73, with red blood cell count slightly above 4,000,000. In the second three months the average hemoglobin was 69 per cent, with the red cell count between 3,000,000 and 3,500,000. In the last three months it was 68 per cent, with the red cell count between 3,500,000 and 4,000,000. In 65 per cent of these patients—private patients, let me repeat, and living in surroundings far above the average as regards general sanitation and hygiene—the hemoglobin went below 65 during their pregnancy.

To take another instance, Nalle,² in North Carolina, investigated the blood in 200 private patients, also living under good hygienic conditions and without any other discoverable cause than pregnancy to explain anemia. 50 per cent of his patients showed less than 4,000,000 red blood cells; 22 per cent, less than 3,500,000; 2 per cent, less than 3,000,000. He also saw the anemia increase as the pregnancy progressed. But in his case the patients were under treatment from the third month and the downward course of the hemoglobin and red cell count was checked at the seventh month. In the ninth month he saw improvement.

Let us glance at some of the larger series, made up of dispensary patients living under less hygienic conditions. Bland, Goldstein and First³ found a hemoglobin below 70 per cent in 58 per cent of a series of 1,000 pregnant women and a red cell count of 3,500,000 or below in 47 per cent of the same

*Read before the Thomas County Medical Society, Thomasville, Georgia, July 22, 1932.

series. These authors likewise found that the anemia became more marked as the pregnancy advanced.

Jerlov,⁴ in northern Europe, found hemoglobin values below 70 in 25 per cent of 1,143 pregnant women. In the group in which the hemoglobin values remained above 70, the average hemoglobin percentage of the group sank from month to month, till, in the last month before delivery, it stood at 71. The tendency toward anemia was thus strongly evident even in that portion of the series in which it did not come to an outspoken anemia.

Of the cases that have come under my observation for the last twenty-four months, the first three months of pregnancy the majority of patients showed a hemoglobin of 65 per cent; after the fourth month, 62 per cent and the last three months showed a hemoglobin of 60 per cent. All of this is probably due to climatic conditions, hookworm and malaria, together with focal infection, which existed in the majority of these cases. After the routine treatment, as is given in this paper, was given these patients, the hemoglobin increased from 10 to 30 per cent during the last month of pregnancy.

These reports show that from 25 to 50 per cent of women go through pregnancy and come to labor with an anemia of sufficient degree to lower quite definitely their fitness to undergo the strain, to cope with such emergencies as may arise, or to resist infection.

It is surprising that this situation can have remained so long without general recognition. It appears obvious that red blood counts and hemoglobin determinations should have as definite a place in prenatal care as has urinalysis; that every pregnant woman should be watched more carefully for the disappearance of iron from her blood as for the appearance of albumin in her urine.

In general, the moderate anemias of pregnancy can be treated successfully by iron or iron and arsenic therapy; by the addition to diet of iron-containing foods; and by the general hygienic measures, including fresh air and sunshine, or, when the latter is not available, actinic ray therapy. Jerlov arrested the anemia in 95 per cent of his cases by iron therapy; in 90 per cent of the cases the blood picture improved under this treatment. He urges treatment in all cases in which the hemoglobin shows a tendency to decline, even though an actual state of anemia may not yet have declared itself. This practice seems the more desirable from the fact that patients with mild anemia suffer a furth-

er reduction in hemoglobin and red cells as the result of labor. In some of these cases of anemia with the blood picture of secondary anemia very good results have been obtained from liver feeding.

In many cases the blood begins to show improvement within a few days after delivery, but six months are frequently required to bring it back to normal. If the woman becomes pregnant again before the blood has completely recovered, she starts the new pregnancy under the grave disadvantage of being already anemic, and it would seem likely, in view of the progressive tendency of the disorder, that she runs a particular risk of developing a severe anemia before the termination of the period of gestation.

It will be noticed that in this type of anemia of pregnancy the anemia has generally remained within moderate limits. In the great majority of cases, the hemoglobin has remained between 60 and 70 per cent. In the largest series, that of Jerlov, in not one case did it go below 40 and in only 8 cases did it go below 50.

Cases are beginning to appear, in the literature, of anemia of pregnancy of a chlorotic type, with a very much lower hemoglobin. Strauss⁵ has reported three cases which, except that they occurred in pregnant women and definitely dated to the pregnancy, are in every way comparable to the chronic chlorosis with gastric achylia that has been described in adult women by McCann and Dye,⁶ Waugh,⁷ and others. McCann and Dye's four patients all described periods of anemia following childbearing. Strauss's three patients were 35, 25, and 24 years of age, respectively. The first had had twelve previous pregnancies, with one anencephalic birth and on the present occasion also was delivered of an anencephalic monster; each of the two younger women had borne twins in previous pregnancies. In two of the women the hemoglobin was 33 per cent, and the red blood cells were between 2,000,000 and 3,000,000. In the third case, the hemoglobin was 35 per cent and the red blood count was 3,500,000. All three responded well to iron therapy. It is a characteristic of this type of anemia, as found by McCann, Dye and Waugh outside of pregnancy, that it responds to iron but not to liver treatment. Strauss believes that in his cases the cause was a conditioned iron deficiency; he feels that because of the faulty assimilation due to the gastric achylia the diet was unable to provide sufficient iron to support the added burden of pregnancy. An added burden

of any other nature, he thinks, might have had a similar effect.

Anemia of pregnancy with the pernicious type of blood picture is a far more serious condition than those with the secondary or chlorotic blood pictures. Fortunately, it is rare. The chief feature in which the blood picture differs from that of true pernicious anemia is in the absence of distinct general macrocytosis with abnormally shaped macrocytes. The clinical picture also resembles that of pernicious anemia. There may be achlorhydria with gastro-intestinal disturbances, sore tongue, paresthesias. The clinical distinction from true pernicious anemia is found in the absence of remissions. The disease is steadily progressive until the end of pregnancy, and the patient is very likely to die before that time arrives, unless she is energetically treated. If the patient survives the pregnancy, labor and puerperium, recovery is the rule. Artificial termination of the pregnancy has been advocated by some, but has been opposed by others on the ground that it exposes the patient to greater danger than allowing gestation to go on to spontaneous delivery. Labor is characteristically short and painless. The child is not anemic and appears to have suffered in no way from the condition of the mother. Liver therapy has given good results in a considerable number of cases of pernicious anemia of pregnancy and is probably the most promising mode of treatment. Transfusions are useful, and before the days of liver therapy repeated transfusions were the chief reliance of the physician with such a case. Recurrence of anemia in future pregnancies is not the rule, except in malarial districts, and in individuals where the causes are not removed.

Anemia develops in 40 per cent of 52 cases in the first two or three months. There is an increase in basal metabolism in about 70 per cent of pregnant women in these anemic types.

Plasmochin compound is given in required doses for malarial conditions in the blood with impunity. Oil of chenopodium, carbon tetrachloride are given for hookworm conditions and other medication given for other parasitic conditions. Removal of focal infection regardless of where it may be and during any of the months of pregnancy is to be considered; good judgment should be exercised in all cases in treating anemia in pregnancy. An abscessed tooth may be let alone today and treated tomorrow. Cases taken in hand early, say the third month and treated energetically the hemoglobin will in-

crease from 25 to 50 per cent in the last months of pregnancy. Otherwise, not treated, the hemoglobin will diminish from where it is at the fourth month from 15 to 25 per cent during the last few months of pregnancy. This is the average, of course, there are exceptions. In the event there are exceptions there would be a more marked diminution of the red blood cell count, giving the patient less resistance for overcoming her burden.

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DIATHERMY TREATMENT OF DEMENTIA PARALYTICA: MICROSCOPIC CHANGES IN TREATED CASES

Walter Freeman, Theodore C. Fong and S. J. Rosenberg, Washington, D. C. (Journal A. M. A., June 3, 1933), state that the substitution of diathermy for malaria in the treatment of dementia paralytica has, in their hands, met with almost complete failure. There were twenty-eight deaths in a series of fifty patients over a period of four years. While they admit that the patients were not of the best type, that the treatment may not have been sufficiently prolonged and that the use of arsenical therapy as an adjuvant was not pushed to the possible limit, the fact remains that, benefit to the patients has been far from impressive. The difference becomes more notable as the period of time elapsed after the treatment becomes longer. In their opinion the early reports on the diathermy treatment of dementia paralytica were published after too short a period of observation, especially since even now it is less than five years since Neymann and King and Cooke first began their experiments.

NEW SIGN OF PERICARDIAL EFFUSION

Of all the evidences that are conventionally employed in determining the diagnosis of pericardial effusion, Eli Moschowitz, New York (Journal A. M. A., May 27, 1933), observed that the conjunction of the following three signs is usually conclusive: (1) widening of the area of cardiac flatness, (2) abrupt transition from pulmonary resonance to cardiac flatness and (3) widening of the cardiac dulness in the second intercostal space. Of these three signs, only the second, so far as the author can gather, has not been described before. No one of the signs taken singly is conclusive.

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**THE EARLY DIAGNOSIS AND
TREATMENT OF CIR-
RHOSIS OF THE LIVER**

The diagnosis of cirrhosis of the liver is not usually made until ascites, jaundice, collateral circulation and evidences of hepatic toxemia make their appearance. It is obvious that an early recognition of the latent phase of this disease is to be desired in order that the proper therapeutic measures may be instituted and if possible the patient protected from further liver injury. Chapman, Snell and Rowntree* recently reported a careful study of fifty-eight cases of cirrhosis of the liver diagnosed in the pre-ascitic stage. In twenty-one cases surgical confirmation of the diagnosis was possible. Forty of the patients were men, eighteen were women and all but sixteen were more than forty years of age.

Grouped according to etiology, twenty-five of the fifty-eight patients used alcohol freely; ten gave a history of syphilis, or they manifested some physical or serologic signs of its presence, five had suffered previously from hyperthyroidism and fourteen had either a history or present evidence of cholecystic disease. Typhoid and malaria were each mentioned by nine patients. Six patients had the definite syndrome of splenic anemia. "More than one etiologic factor was present in twenty-three of the fifty-eight cases."

"The complaints noted on the patients' admission to the Mayo Clinic were: loss of weight in twenty-one cases, asthenia in thirty-eight, flatulence in thirty-three, abdominal pain in thirty-three, jaundice in thirty-one, constipation in seventeen, diarrhea in eight and gastro-intestinal hemorrhage in sixteen." "The primary symptoms" mentioned in forty-eight of the cases may be tabulated as follows: indefinite indigestion, usually associated with flatulence, in sixteen cases; pain, colic or soreness in the region of the

liver in fourteen cases; severe constipation in three cases; jaundice in six cases; gastro-intestinal hemorrhage in five cases; diarrhea in two cases and enlarged liver in two cases." The most important and constant physical finding was a palpable enlarged liver which was noted in forty-eight cases. Other physical findings noted were as follows: palpable spleen in twenty-seven cases, slight edema of the lower extremities in twenty, visible jaundice in seventeen, hemorrhoids in nine, visible collateral circulation in seven and hernia in six."

The most significant laboratory data consisted chiefly of changes in the blood count indicating a moderate secondary anemia and impairment of hepatic function as shown by the bromsulphalein test. This test was done in thirty-eight cases and there was retention of the dye in twenty-six. A positive bromsulphalein test, together with hepatic and splenic enlargement, constitute the principal means of identifying compensated cirrhosis.

The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.

Comfort and Snell call attention to certain therapeutic difficulties met with in the treatment of this disease. First, most forms of hepatic disease associated with ascites are recognized clinically only when a terminal stage has been reached; second, it is difficult to determine the etiology of diffuse hepatic lesions; third, there are no specifics for hepatic insufficiency. The medical treatment of portal cirrhosis should be directed toward the removal of etiologic factors, the combating of hepatic insufficiency and the control of ascites and edema. Hepatic insufficiency must be considered first, the ascites and edema later. The administration of carbohydrates intravenously, orally (400 to 500 gms. daily), and by proctoclysis and the administration of calcium constitute the only known remedies for hepatic toxemia. The protective effect of carbohydrates in hepatic injury both in experimental animals

*Chapman, Charles B., Snell, Albert M., Rowntree, Leonard G., J.A.M.A., 100, 1735, 1741. June 3, 1933.

and preoperatively and post-operatively in humans has been emphasized by Whipple, Graham, Mann and McGath, and Ravdin. Bollman has shown that a high protein diet and meat extractives may produce ascites in animals with experimental obstructive jaundice. The intravenous administration of concentrated solutions of glucose has the double effect of maintaining the hepatic glycogen reserve and favoring diuresis.

In 1925 Rowntree, Keith and Barrier reported the effective use of ammonium salts and the organic mercurial compounds, novasurol and salyrgan in treating ascites and edema complicating cirrhosis of the liver. They also used a special diet and limited the salt and fluid intake. This method proved successful in 50 per cent of such cases and moderately successful in an additional 30 per cent. Dramatic loss of fluid by diuresis is reported in many cases. Care must be exercised in the selection of patients for treatment with these diuretics. Snell reports that elderly or cachectic patients do not tolerate diuretics. In the presence of jaundice diuretics are likely to prove ineffective and patients are frequently made worse by their use. Gastro-intestinal hemorrhage is also a contra-indication for their use. Patients with mental disturbances and evidences of hepatic toxemia are poor subjects for vigorous treatment.

The following quotation contrasts excellently the difference in the final therapeutic result obtained in the two groups of cirrhosis; namely, the decompensated or late cirrhosis and the compensated or early cirrhosis.

"The duration and prognosis of the compensated type of cirrhosis as compared to the decompensated type with ascites may be summarized as follows: In the series of 112 cases of decompensated or ascitic cirrhosis reported previously, eighty-four patients (75 per cent) had died on an average of sixteen months after ascites was first noted, and twenty-eight (25 per cent) are living an average of thirty-eight months after the development of ascites. In the series of fifty-eight cases of compensated or nonascitic cirrhosis, reported here, twenty-five patients (43 per cent) had died on an average of

sixty months after symptoms were first noted, whereas thirty-three (57 per cent) are living an average of almost eight years after the onset of symptoms."

M. S. D.

MEDICINE AT THE CROSSROADS

Harvey Cushing, Boston (*Journal A. M. A.*, May 20, 1933), says: "A recent leader of public opinion openly states that most of those at present dealing with the sick—meaning more specifically the doctor—have their faces turned toward the past. If history but repeats itself, where else but from the past *can* we learn anything? We certainly can draw little comfort and few admirable lessons from the late present. . . . Lay reformers speak lightly of his code of ethics as something long since outworn, but so far it has prevented him, for one thing, from capitalizing for his own benefit his inventions and therapeutic discoveries. . . . By the combined efforts of both groups, doctor and sanitary official, the expectancy of life has been greatly prolonged—and will be more so before we are through. Yet while we point to this triumph, there are just so many more people who live longer only to be overtaken, the health official with the rest, by unforeseen and unpreventable accidents for which they seek the best surgeon they can find, or by some malady for which they demand the very best physician—like enough a highly trained specialist. . . . Legislation and attempted coercion do not always accomplish what reformers anticipate. . . . There has been much idle talk, too, regarding scientific medicine and the modern scientific doctor who with his ingenious appliances and mathematical exactitude has come to supplant the old-fashioned 'practical' doctor. . . . As a matter of fact, it will be a great shock to laymen to learn that a great part of what is called scientific medicine is a fetish and wholly unscientific. . . . The practice of medicine is an art and can never approach being a science even though it may adopt and use for its purposes certain instruments originally designed in the process of scientific research. . . . The explanation of the doctor's seeming want of business acumen lies partly in the restraining influence of his time-honored precepts of conduct, partly in his preference to hold the respect of his own kind rather than of the financial world, and partly because inherently he's that kind of person else he wouldn't have gone into medicine in the first place. . . . A form of legal racket which thrives on the insurance system at the expense of the profession is the rapidly spreading prevalence of malpractice suits particularly against surgeons, for imaginary grievances sustained, more often than not, as the outcome of some operation done purely for charity. . . . Whether we have temporarily overstressed science and research in medical education and let it come to enslave us is not for anyone to say. If it has, the day will arrive when of itself the pendulum will swing and there will be a corrective reaction, for there usually is to whatever we overdo. . . . There are two sides to

every question, and inability to see both constitutes the fundamental weakness of all theories and particularly those relating to the biologic and social sciences. . . . But however this may be, those who deal with the science of society deal with something that actually *does* pulsate with so short a time cycle that conditions almost from year to year are never quite the same, so that our theories of today are likely to need modifying tomorrow."

TRAUMATIC PERFORATION OF ABDOMINAL VISCERA

Case Report

EDGAR BOLING, M.D.

Atlanta

In the recent surgical literature upon this subject there has been a definite trend to marked conservatism in the management of cases of possible and probable traumatic perforations of intra-abdominal viscera. It has been advised that surgical intervention be postponed until a definite diagnosis can be made. As a laparotomy upon a patient in shock usually deprives him of any chance of recovery regardless of injury, it is not advocated that injured patients with suspected perforation be explored at once regardless of their condition. It is the purpose of the following case report, however, to illustrate the importance of an immediate exploratory laparotomy.

A white man, 37 years of age, was admitted to the Georgia Baptist Hospital at 10:30 P.M. on the night of January 25, 1932. He had been stabbed in the abdomen with a long-bladed pocket knife about 4:00 o'clock in the afternoon. The incident occurred in his home town fifty miles from Atlanta and he was seen by a local physician who advised immediate hospitalization. Upon admission to the hospital he was drunk and vomiting frequently. Two stab wounds of the abdomen were present: one just below the left costal margin in the left mid-clavicular line, and the other on a horizontal line with, and one inch to the left of the umbilicus. The stab wounds were about one-half inch in length and there was no drainage present. There was a slight tenderness to deep palpation immediately adjacent to these wounds. Only slight muscle rigidity could be elicited on the left side. Temperature on admission was 98°, pulse 100, and respiration 22. The patient was not complaining of any pain and with exception of the frequent vomiting suffered no discomfort. There was no pain beneath the shoulder blades. A hypodermic, presumably of morphine, had been administered by the local physician some five hours before admission to hospital. The red blood count was 4,350,000, the hemo-

globin estimation 85 per cent, and the white blood count was 15,050 with 88 per cent polymorphonuclear cells. His urine was negative. Physical findings were such that a diagnosis of superficial wounds of the abdominal wall seemed most probable. Realizing the possibility of error in diagnosis, however, which might lead to a fatality without immediate surgical intervention, it was decided to do an exploratory laparotomy. A high left rectus incision was made under spinal anesthesia. The peritoneum was opened and it was found that the lower stab wound penetrated the peritoneal cavity which was partially filled with blood. The jejunum was perforated through and through about six inches from the ligament of Treitz. These perforations were approximately one-half inch in length with the mucosa protruding through them. The jejunum was well filled with food but there was only slight contamination from leaking of intestinal contents. Three small lacerations were found in the jejunal mesentery: one of these hemorrhaging profusely as a small branch of the superior mesenteric artery had been severed. There were multiple mesenteric hematomata. The vessel was ligated, the mesenteric lacerations were sutured and the jejunal perforations were closed with a double row of sutures. The abdomen was closed in layers with drainage. The patient had an uneventful convalescence.

In this case a comparatively simple surgical procedure was instituted resulting in a speedy and safe recovery of the patient. One cannot help but surmise the hazardous course of events—hemorrhage, shock, peritonitis—had the patient been observed until a definite diagnosis could be made. The conservative procedure of observing the patient until a definite diagnosis can be made before intervention seems far more radical than the so-called radical surgical procedure of early intervention.

STATE TUBERCULOSIS SANATORIUM ALTO

*To the Members of the
Medical Association of Georgia:*

At the Macon meeting of our Association, many inquiries were made of the Superintendent and others of the Medical Staff of the State Tuberculosis Sanatorium relative to facilities at the sanatorium available to private practitioners for study of diagnosis and treatment of pulmonary tuberculosis. Especial emphasis was placed by most of those making inquiries on the effect of collapse measures in the treatment of certain types of tuberculosis.

This is to announce that the Sanatorium and its Staff will be very happy to have physicians visit our institution from time to time for the purpose of acquiring such information as desired.

MARVIN F. HAYGOOD, M.D., *Superintendent.*

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

A PROBLEM

In the preparation of this article for the Journal no attempt has been made to present it in narrative form but only to give an insight to the seriousness and prevalence of the venereal diseases.

The facts are given from data prepared by Assistant Surgeon General Taliaferro Clark, in charge of venereal disease control of the United States Public Health Service. The latest statistical information obtainable indicates that there has been practically no change in the status of venereal diseases since April of last year.

The attention of the profession is seriously invited to the facts as brought out that some definite steps may be taken to lower the incidence of these diseases.

The far reaching results of these diseases, and the cost to the tax payers of Georgia, should arouse both physicians and laity.

Dr. Clark says, "From May, 1926, to February, 1929, the U. S. Public Health Service surveyed for venereal diseases twenty-five communities in all parts of the nation. These communities ranged in size from towns of less than 25,000 to the large metropolises with populations in the millions. Several whole states were surveyed. The total population of the surveyed territory was 24,498,000 or 20 per cent of the total estimated population of the United States, and this sample was believed to be both geographically and numerically representative. In this population there were 182,782 cases of gonorrhea and syphilis reported under treatment or observation as of any one day. Previous studies by the Public Health Service have indicated that there is no significant seasonal trend in venereal diseases. There are, as revealed by this study, 7.46 cases per 1,000 population of either gonorrhea or syphilis constantly under treatment, 10.00 cases per 1,000 males and 4.86 cases per 1,000 females.

"The rate for gonorrhea is 3.41 per 1,000 as compared with 4.05 per 1,000 for syphilis. In gonorrhea the male rate is 5.03 per 1,000 while the female rate is much lower, being only 1.75 per 1,000. The rate for chronic gonorrhea is slightly higher than that for acute.

"In syphilis the male rate is still higher than the female but not nearly so much so as in gonorrhea. The male syphilis rate is 4.09 while the female syphilis rate is 3.11 per 1,000.

"The rate for the total venereal disease under treatment for the white population is 8, as compared with 11 per 1,000 for the colored. The rates for gonorrhea are quite similar, but there is a great difference in the syphilis rates; the white rate being 4 per 1,000 while that for the colored is 7.2 per 1,000. This difference in the colored rate is especially emphasized in the colored female. The case rate for the colored female is 6.4 per 1,000 as compared with 2.8 rate among the white female.

"Based on the selected communities and the experience of the 30,746 physicians reporting in these prevalence studies and the 1,101 public institutions treating the venereally infected among a population of 24,498,000, it is estimated that there are 643,000 cases of syphilis and 474,000 cases of gonorrhea constantly under medical care in the United States.

"Further, it is estimated that there are yearly 423,000 new cases of syphilis and 679,000 new cases of gonorrhea, which seek treatment for their disease in the early stages, in the United States.

"A study of the prevalence of syphilis in six different counties in as many southern states has shown that a positive Wassermann exists in 35 per cent of the rural Negroes in one state. Other southern states have shown 29 per cent, 23 per cent, 19 per cent, 12 per cent and 6 per cent. All these Wassermans were performed on negroes and the positive tests were rechecked. It is probable that the figures represent a lower prevalence of syphilis than actually exists since every syphilitic case does not have a positive Wassermann.

"Syphilis stands first among the most frequently reported infectious diseases. Measles cases (reports of which are only fragmentary, a fact which is also true of syphilis) are reported in about the same number as syphilis. Gonorrhea stands about fifth as a reported cause of infectious illness.

"Relatively about 35,000 more cases of venereal disease are reported annually than scarlet fever; 79,000 more of venereal diseases than all forms of tuberculosis; and 500,000 more of venereal diseases than of diphtheria. The number of venereal diseases reported annually is three times as many as the number of small pox cases and five times as many as the cases of typhoid fever.

"Maitland (Amer. Heart Jour., St. Louis,

1930, Vol. VI, No. 1) reported that in 300 cases of heart disease which came to autopsy, syphilis was responsible for 33.7 per cent, arteriosclerotic heart disease 46.3 per cent, and rheumatic conditions 20 per cent.

"An average of results of the published reports from 1916 to 1927 shows that of women admitted to maternity hospitals 6.9 per cent have a positive Wassermann reaction. While a positive Wassermann reaction for practical purposes means the presence of syphilis, a negative reaction does not mean its absence. Syphilis is transmitted from mother to infant if the former remains untreated, and this disease is one of the most common causes of prenatal and infantile death.

"If the loss in the general male population between the ages of 15 and 45 in non-effective days (illness) resulting annually from venereal diseases is estimated on the attack rate for this group, the number of non-effective days would approximate 21,000,000. Assuming an arbitrary value of \$4.00 as the average daily earning for this group, the financial loss would be \$84,000,000 per annum, or a loss of approximately a half-day for each of the male population of the United States between the ages of 15 and 45.

"It is estimated that from 2 to 5 per cent of the cases of syphilis develop general paresis. This one complication constitutes 8.78 per cent of the first admission to insane institutions. General paresis and syphilis of the central nervous system are responsible for constant institutional care of approximately 12,300 persons. Of these patients, 8,700 die

flected by the morbidity reports of our physicians.

It will be seen that a total of 11,478 cases are reported by our physicians for the seven diseases studied. The five diseases other than syphilis and gonorrhea give us a total of 5,635 divided, whooping cough 502, pellagra 411, tuberculosis 972, typhoid fever 1,156, and malaria 2,594.

The total cases of syphilis and gonorrhea are 5,843 divided, gonorrhea 1,838, and syphilis 4,005.

The above statistics are from private physicians of new cases in their practice and do not include clinic cases. The totals of clinics for the years 1931 and 1932 are syphilis 23,748 and gonorrhea 9,137.

The reports of the division of epidemiology for June through December of last year are taken because they perhaps represent the highest peak of malaria, typhoid, pellagra, whooping cough, and tuberculosis. These diseases are selected for the reason that they are not alone more prevalent in summer and fall but are also the prevailing diseases in the age period that the venereal diseases are at their height. Whooping cough is selected because it about balances the venereal diseases owing to the prevalence of childhood venereal diseases. Including inherited syphilis, as well as accidental infection by months, they are as follows:

Morbidity reports of physicians for the months of June, July, August, September, October, November, and December, 1932, of seven selected diseases.

Disease	June	July	August	September	October	November	December	Total
Gonorrhea	262	303	233	301	218	210	311	1838
Malaria	188	303	265	430	414	385	609	2594
Pellagra	160	88	55	45	16	20	27	411
Syphilis	600	737	619	768	473	406	402	4005
Tuberculosis	145	153	183	142	130	100	119	972
Typhoid	113	355	269	234	105	55	25	1156
Whooping Cough	111	89	87	28	72	44	71	502

each year after having received an average of 14 months' hospitalization. At a \$2.50 per day hospital rate the annual cost of hospitalizing the 12,300 cases of general paresis and syphilis of the nervous system is \$11,270,000.

"These figures estimate only a portion of the financial loss due to the venereal diseases and take into account no consideration of the mental anguish so often caused by them."

The conditions in Georgia are partially re-

It will also be of interest to review the work done in the serological department of our laboratory. For the two year period, the total number of specimens examined were 93,566. Of this number in the year 1931, 21.3 per cent were positive, and 1932 gave 23.8 per cent positive. For the two year period 22.5 per cent was the average. This shows an increase of positives in 1932 of 2.5.

This problem is a serious one to which the united effort of every physician is invited.

WOMAN'S AUXILIARY

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PRESIDENT'S MESSAGE

Dear Co-workers:

In discussing organizations, we usually mention the president, officers, chairmen, then the members. That is similar to building the roof first and the foundation last. Let us think of our Auxiliary in a structural form that is invulnerable and that will always permit growth: a foundation of alert, informed, loyal membership, supporting an executive board under leadership that must be considerate, discerning, directing, and whose slogan for Auxiliary success is "Individual Responsibility".

To build, we must increase membership from eligible wives, but invitations alone are insufficient. Can you tell how and why a doctor's wife should join the Auxiliary? We find a surprising number unable to answer. Know the objectives and activities of your local, state and national auxiliaries. Be proud to serve under a profession which asks not what it can get out of life, but what it can give to life. The tongue of the wise is health, and what the public thinks and does in regard to health may be molded by the Auxiliary. An expression of opinion of an individual member is generally considered by lay people as the opinion of individual husbands, but as Auxiliary members, the public realizes that what we do has the authority of the Medical Association of Georgia back of it, as we carry out a program on health education prepared for us by the Association. In turn, we accept a responsibility for education in Auxiliary projects and an allegiance that guards every word.

A change has been made in the policy of the Student Loan Fund; it is now restricted to families of physicians with preference given to medical students.

The extension courses for physicians will be held during the summer and in each locality a session reserved for the Auxiliary. The time and place will be mailed to you and we urge you to attend.

With the co-operation of the State Board of Health in mimeographing, a news-letter will be prepared monthly, by the State Auxil-

iary and sent to all local auxiliaries, the State Executive Board, the President, Councilors, District Presidents of the Medical Association of Georgia, the Commissioner of Health. It is to be an exchange of activities,—local, state, national,—not only to stimulate us, but to give us pleasure through the accomplishments of others. Details will be mailed each Auxiliary and the first letter sent in September.

This year we will observe the new congressional districts, of which we have ten. Several vacancies are due to this, but managers will be elected at the next meeting, where needed.

Will members who plan to attend the convention of the Woman's Auxiliary to the American Medical Association inform me, please?

We need relaxation during the warm southern summer, but do ask your husband to take you to your district meeting and to bring home each month the Journal of the Medical Association of Georgia, so you may read the auxiliary pages.

Faithfully yours,
 MARGUERITE B. WHITE.
 MRS. J. BONAR WHITE.

CONGENITAL ATRESIA OF ALIMENTARY TRACT: DIAGNOSIS BY MICROSCOPIC EXAMINATION OF MECONIUM

Sidney Farber's, Boston, (Journal A. M. A., June 3, 1933), simple procedure for the early diagnosis of congenital atresia of the esophagus and intestine is based on the constant presence in normal meconium of cornified epithelial cells, which are derived from the skin of the fetus and which are swallowed with the other amniotic sac contents to contribute to the formation of meconium. Microscopic examination of smears of normal meconium, when treated with ether, stained with Sterling's gentian violet and decolorized by acid alcohol, reveals large numbers of cornified epithelial cells. All other cells are decolorized by this method, thus permitting easy recognition of cornified cells. The absence of cornified epithelial cells in smears of meconium is proof of the existence of congenital atresia of the alimentary tract.

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MACON, MAY 9, 10, 11, 12, 1933

A

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 Akerman, Joseph, Augusta
 Alden, Herbert, Atlanta
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 Bedingfield, W. R., Augusta
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 Berry, Arthur N., Columbus
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 Clark, T. H., Douglas
 Clark, W. H., LaGrange
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 Clay, Grady E., Atlanta
 Cline, B. McH., Atlanta
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 Cofer, Olin S., Atlanta
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 Coleman, Warren A., Eastman
 Coleman, Y. R., Macon
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 Crawford, Herschel C., Atlanta
 Crovatt, J. G., Douglas

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 Fullilove, H. M., Athens
 Funkhouser, W. L., Atlanta

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 Harbin, R. M., Jr., Rome
 Harbin, W. P., Jr., Rome
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 Holliday, Paul L., Athens
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 Holmes, Walter R., Atlanta
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 Hutchins, W. J., Buford

I

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Ivey, J. C., Atlanta

J

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Joiner, Hartwell, Gainesville
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Jordan, W. P., Columbus

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Kenyon, S. P., Dawson
Ketchin, S. C., Louisville
King, J. L., Macon
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Klugh, Geo. F., Atlanta
Kracke, Roy R., Atlanta

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Lancaster, H. H., Clermont
Lang, G. H., Savannah
Lanier, J. E., Moultrie
Laws, C. L., Atlanta
Leadingham, R. S., Atlanta
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Lewis, S. J., Augusta
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Lokey, Hugh M., Atlanta
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Lunsford, Guy G., Millen

M

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Maner, Edwin N., Savannah
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Maloy, C. J., Helena
Martin, F. M., Shellman
Martin, Wm. O., Jr., Atlanta
Massey, W. F., Chester
Mashburn, Marcus, Cumming
McAfee, L. C., Macon
McAllister, J. M. C., Rochelle
McArthur, Chas. E., Cordele
McArthur, C. H., Rome
McArthur, Thos. J., Cordele
McCall, J. T., Rome
McCollum, Roy, Jr., Augusta
McCord, M. M., Rome
McCoy, H. S., Sylvester
McClure, J. H., Cornelia
McCravey, Gus, Augusta
McCullough, K., Waycross
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McDermid, H. C., Vidalia
McDonald, Harold P., Atlanta
McDougall, J. Calhoun, Atlanta
McElroy, S. L., Ocilla
McGahee, R. C., Augusta
McKemie, H. M., Albany
McMichael, J. R., Quitman

McMichael, V. H., Macon
Mealing, H. G., Augusta
Meeks, J. L., Gainesville
Mercer, J. E., Vidalia
Meriwether, W. W., Macon
Michel, H. M., Augusta
Miles, W. C., Griffin
Miller, R. L., Waynesboro
Miller, T. B., Richland
Minchew, B. H., Waycross
Mobley, J. W., Jr., Pelham
Mobley, W. E., Macon
Monfort, J. M., Atlanta
Montgomery, R. C., Butler
Mosteller, Ralph, Augusta
Moon, P. L., Atlanta
Moon, P. L., Jr., Atlanta
Mooney, A. J., Statesboro
Moore, H. M., Thomasville
Morrison, A. A., Savannah
Morrison, Howard J., Savannah
Moses, Harry, Macon
Mulherin, W. A., Augusta
Murphey, Eugene E., Augusta
Murray, G. S., Columbus
Myers, Wm. H., Savannah

N

New, J. E., Dexter
Newberry, R. E., Atlanta
Newman, W. A., Macon
Newton, R. G., Macon
Nicolson, Wm. P., Atlanta

O

Oppenheimer, Russell H.,
Emory University
Osborne, L. S., Fitzgerald
Osborne, V. W., Atlanta
Overby, N., Sandersville
Owensby, N. M., Atlanta

P

Palmer, J. W., Ailey
Park, Emory R., LaGrange
Parkerson, I. J., Eastman
Patterson, J. C., Cuthbert
Paullin, Jas. E., Atlanta
Penland, J. E., Waycross
Pennington, C. L., Macon
Perkinson, W. H., Marietta
Perry, S. W., Atlanta
Phillips, A. M., Macon
Phillips, H. K., Cleveland
Phinzy, Irvine, Augusta
Pilcher, J. J., Wrens
Pittard, L. Y., Monticello
Pittman, Jas. L., Atlanta
Poer, D. Henry, Atlanta
Porch, Leon D., Macon
Prather, W. S., Americus
Primrose, A. C., Americus
Price, W. T., Augusta
Pruitt, M. C., Atlanta
Pund, Edgar R., Augusta

R

Rawls, L. L., Macon
Reavis, W. F., Waycross
Read, Joseph C., Atlanta
Redfean, J. A., Albany
Reese, D. S., Carrollton
Revell, S. T. R., Louisville
Rhodes, Jno. A., Crawfordville
Rhodes, R. L., Augusta
Richardson, C. H., Macon
Richardson, R. W., Macon
Ridley, C. L., Macon
Ridley, H. W., Atlanta
Roberts, C. W., Atlanta
Roberts, M. Hines, Atlanta
Roberts, O. W., Carrollton

Roberts, Stewart R., Atlanta
Rogers, A. A., Commerce
Rogers, Harry, Atlanta
Rogers, J. V., Cairo
Rogers, T. E., Macon
Rogers, W. D., Jr., Augusta
Rosen, Samuel F., Savannah
Ross, Jas. T., Macon
Roule, J. Victor, Albany
Rozar, A. R., Macon
Rubin, S. N., Macon
Rushin, Chas. E., Atlanta

S

Sage, Dan Y., Atlanta
Sage, E. B., Macon
Sams, J. R., Covington
Sandison, J. Calvin, Atlanta
Sauls, H. C., Atlanta
Savage, C. P., Montezuma
Schenck, H. C., Atlanta
Schley, F. B., Columbus
Schneider, J. F., Atlanta
Scott, W. M., Milledgeville
Selman, W. A., Atlanta
Shanks, E. D., Atlanta
Sharp, C. K., Arlington
Sharpley, H. F., Jr., Savannah
Shearouse, Wm., Savannah
Shepard, W. O., Bluffton
Sherman, J. H., Augusta
Sigman, Jno. M., Macon
Simmons, J. W., Brunswick
Simmons, R. O., Rome
Simmons, Walter E., Metter
Sinkoe, Samuel J., Atlanta
Smith, Geo. B., Rome
Smith, Geo. L., Swainsboro
Smith, J. Allen, Macon
Smith, J. M., Valdosta
Smith, L. A., Quitman
Smith, Lewis M., Atlanta
Smith, M. R., Cordele
Smith, Randolph, Atlanta
Smith, S. S., Athens
Smith, W. A., Atlanta
Standifer, J. G., Blakely
Starr, Trammell, Dalton
Stephens, C. M., Waycross
Strickler, C. W., Atlanta
Stockard, Cecil, Atlanta
Story, J. W., Perry
Swanson, Cosby, Atlanta
Swint, R. C., Milledgeville
Sydenstricker, V. P., Augusta

T

Taylor, R. L., Davisboro
Teasley, B. C., Hartwell
Teasley, Gerald H., Emory Univ.
Thomas, D. R., Jr., Augusta
Thomas, J. W., Augusta
Thompson, D. O., Atlanta
Thompson, O. R., Macon
Thompson, Wm. C., Dublin
Tidmore, T. L., Atlanta
Toepel, Theodore, Atlanta
Tolleson, H. M., Hahira
Tracy, J. L., Sylvester
Traylor, Geo. A., Augusta
Traylor, S. B., Barnesville
Trimble, W. H., Atlanta
Turner, Jno. W., Atlanta
Turner, W. W., Nashville

U

Upchurch, W. E., Atlanta
Upshaw, C. B., Atlanta

V

Vickers, Thos. E., Harrison
Vinton, Luther M., Atlanta

Vinson, Frank, Macon
Vinson, T. O., Augusta
W

Waites, S. L., Covington
Waits, Chas. E., Atlanta
Walker, C. H., Macon
Walker, D. D., Macon
Wall, J. C., Eastman
Ware, D. B., Fitzgerald
Ware, Ford, Americus
Ware, R. M., Fitzgerald
Wasden, C. N., Macon
Wasden, H. A., Macon
Waters, W. C., Atlanta
Watson, O. O., Macon
Watson, S. E., Augusta
Watt, Chas. H., Thomasville
Weaver, H. G., Macon
Weaver, O. H., Macon
Webb, Fred L., Macon
Wellborn, C. J., Gainesville
Wells, W. Frank, Atlanta
Whelchel, C. D., Gainesville
Whelchel, F. C., Alto
Williams, W. A., Macon
Williams, W. J., Augusta
Willis, Clarence H., Barnesville
Willis, T. V., Brunswick
Wilson, Pleas, Newborn
Wilson, R. B., Atlanta
Winchester, M. E., Atlanta
Wise, B. T., Americus
Wise, S. P., Americus
Wood, D. L., Dalton
Woodward, Wade, Atlanta
Wright, Edwin S., Atlanta
Y

Yampolsky, Joseph, Atlanta
Yarbrough, Y. H., Milledgeville
Youmans, H. D., Lyons
Young, W. W., Atlanta
Z

Zachary, J. D., Gray

GUESTS AND VISITORS

R. Holmes Mason, D.D.S., Georgia Dental Association, Macon.

Merrill C. Sosman, Peter Bent Brigham Hospital, Boston, Mass.

Jane Van De Vrede, R.N., Georgia State Nurses' Association, Atlanta.

Oliver C. Wenger, United States Public Health Service Clinic, Hot Springs, Ark.

EMORY ALUMNI CLINIC WEEK

The Emory Alumni Clinic Week closed with an elegant banquet at the Atlanta-Biltmore Hotel, Atlanta, Friday, June 9th.

A small decrease in registration was thoroughly offset by the regular attendance and determined efforts of all participants. With this it was one of the most profitable and valuable weeks in the history of the organization.

Officers elected for 1934 were as follows:

President—Dr. John B. Fitts, Atlanta.

First Vice-President—Dr. E. O. Veale, Arnoldsville.

Second Vice-President—Dr. S. F. Scales, Carrollton.

Secretary-Treasurer—Dr. Marion C. Pruitt, Atlanta.

Council—Dr. B. C. Bird, Dr. Omar F. Elder and Dr. Samuel Stampa.

FIFTH DISTRICT MEDICAL SOCIETY MEETING ACADEMY OF MEDICINE Atlanta

June 29, 1933, 3:00 P.M.

OFFICERS

President—Dr. Joseph Yampolsky, Atlanta.

Vice-President—Dr. Geo. W. Fuller, Atlanta.

Secretary-Treasurer—Dr. H. H. Askew, Atlanta.

Ass't. Secretary-Treasurer—Dr. Edgar Boling, Atlanta.

Councilor—Dr. W. A. Selman, Atlanta.

Vice-Councilor—Dr. M. C. Pruitt, Atlanta.

PROGRAM

Address of Welcome

Dr. W. E. Barber, President of Fulton County Medical Society.

Response to Address of Welcome

Dr. W. A. Selman, Councilor of Fifth District.

The Medical Association of Georgia

Dr. Charles H. Richardson, President of the Medical Association of Georgia.

Introduction by Dr. Allen H. Bunce, Secretary-Treasurer of the Association.

Penetrating Wounds of the Abdomen

Dr. J. D. Martin, Jr., Instructor in Surgery, Emory University School of Medicine.

To lead the discussion: Drs. I. A. Ferguson, A. O. Linch, D. C. Elkin.

Some Hazards of the First Year of Life

Dr. Charles E. Boynton, Former Professor of Pediatrics, Atlanta Medical College and Medical Director of the Good Samaritan Clinic for the Treatment of Glandular Disturbances.

To lead the discussion: Drs. F. Lee Bivings, Samuel Perry, M. Hines Roberts.

The Correction of Obesity by Low Calorie Diet (Method of Evans and Strang)

Dr. Harold Bowcock, Associate in Medicine, Emory University School of Medicine.

To lead the discussion: Drs. Hal Davison, J. K. Fancher, James E. Paullin.

Adjournment Until 8:00 O'Clock

EVENING SESSION, 8:00 P.M.

Peptic Ulcer; A Study of Eighty-Five Cases

Dr. J. C. Patterson, Chief Surgeon Patterson Hospital, Cuthbert.

To lead the discussion: Drs. Lon Grove, W. E. Person, Frank K. Boland, J. J. Clark.

Present Day Drugs and Diseases of the Heart

Dr. Stewart R. Roberts, Professor of Clinical Medicine, Emory University School of Medicine.

To lead the discussion: Drs. J. C. Massee, H. C. Sauls, W. C. Waters.

Dermatomyositis

Dr. V. P. Sydenstricker, Professor of Medicine, Medical Department of University of Georgia, Augusta.

To lead the discussion: Drs. James E. Paullin, Lewis M. Gaines, C. W. Strickler.

Chronic Endocervicitis

Dr. Charles H. Richardson, President of the Medical Association of Georgia.

To lead the discussion: Drs. Simon Smith, W. F. Shallenberger, John Denton.

COMMUNICATION

Medical and Surgical Fee Lost by Decision of Court To the Editor:

On March 27, 1930, I was called to the Fox Theatre, in Atlanta, to see Mr. J. G. Colvin, the assistant manager, who reported that in lifting a desk he had strained himself. Examination showed a small inguinal hernia. I reported this case to the Department of Industrial Relations on the required Form 18. This report was sent to the theatre, through them to the insurance carriers, and then to the Department of Industrial Relations. Two days later, March 29, 1930, I was called at 2:00 A.M. by the manager of the theatre and told that I was to see Colvin at his hotel. I found that he had a strangulation of his hernia and that immediate operation was imperative as a life-saving measure. I transferred him, with the consent of his employers, to Emory University Hospital, and performed an operation for hernia. He recovered normally from this operation. Additional reports on this operation were filed with the insurance carriers and the management of the theatre on the morning of the operation. Another Form 18 was used for this subsequent report. At the expiration of the necessary period of disability a final report and bill was rendered to the employer and the insurance carrier. Several days after this report and bill were filed, Colvin approached the insurance carrier and asked for his compensation for lost time and for the medical fee in the case, agreeing to pay me and the hospital. He was given a check for a sum in excess of one hundred and thirty dollars. He endorsed this check, cashed it and left Atlanta. About one month after rendering my bill to the insurance carriers. I approached them asking for payment. I was told that the bill had been paid and when I stated that I had received no payment for my services I was told that it had been paid once and would not be paid again. I appealed to Commissioner Whitaker of the Department of Industrial Relations and obtained his verdict. The Insurance carrier appealed to the Commission as a Whole and again I received the verdict. The insurance carrier then appealed to the Superior Court of Fulton County and again, after a delay of a year or more I obtained a verdict. An appeal was then made to the Court of Appeals and after another delay of a year a decision was handed down stating that as the bill had been paid and as the insurance carrier could not be held responsible for more than one hundred dollars total medical expense in the case, the decision of the Industrial Commission and Superior Court should be reversed and judgment was rendered for the insurance company.

At present I am faced with the loss of my surgical fee after services were rendered in good faith, no ques-

tion of my right to operate on this patient having been raised at any time, and in addition have been rendered a bill for forty dollars court costs. It would seem from this decision of the Court of Appeals that a surgeon has no lien right in the medical fee to be paid by an insurance company in cases where operations are done under the rulings of the Department of Industrial Relations.

I am unable to interpret the decision of the Court of Appeals from the question of its legality, but morally I believe that the surgeon in such a case should be protected against unscrupulous persons such as the patient in this case.

If the matter is of sufficient interest and concern to the medical profession of the state as a whole I will be glad to assist the attorneys for the Association in any further prosecution of the matter that may be considered just.

GEO. F. EUBANKS, M.D.

June 2, 1933

478 Peachtree St., N.E.

Atlanta.

NEWS ITEMS

The Randolph County Medical Society met at Cuthbert on June 1st. Dr. J. S. Beard, Edison, read a paper entitled "New Treatment for Malaria".

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, June 1st. Titles of papers on the scientific program were as follows: "The Beneficial Effects of Pituitary Extract on Certain Heart Conditions—Case Report", Dr. John Funke, Atlanta; "Studies of the Dying Human Heart", Dr. Jas. Fletcher Hanson, Atlanta; "Treatment of Diabetic Coma", Dr. Jas. E. Paullin, Atlanta. The discussions were led by Dr. C. W. Strickler, Dr. H. M. Bowcock and Dr. Clarence Laws, all of Atlanta.

The graduating exercises of the University of Georgia Medical Department, Augusta, were held at the Richmond Academy Auditorium, on June 5th. Dr. Charles R. Stockard, Professor of Anatomy of Cornell University Medical College, Ithaca, New York, was the commencement speaker. Those in the graduating class were: D. T. Bond, Danielsville; C. D. Bowdoin, Adairsville; G. J. Bridges, Atlanta; W. H. Brooks, Augusta; W. E. Brown, Greensboro; A. H. Center, Savannah; C. J. Derrick, Oglethorpe; H. L. Dismuke, Ocilla; L. G. Foster, Savannah; A. G. Funderburk, Donalsonville; I. S. Giddens, Ray City; A. J. Graves, Macon; O. S. Gross, Glennville; Sage Harper, Wray; R. T. Heath, Augusta; J. E. Johnson, Jr., Elberton; M. K. Kellogg, Augusta; P. S. Kemp, Sylvania; Joseph Krafka, Jr., Augusta; R. E. Leonard, Augusta; A. G. LeRoy, Clay Hill; C. M. Mulherin, Augusta; O. B. Murray, Rossville; R. F. Payne, McCaysville; T. A. Peterson, Ailey; W. D. Rogers, Jr., Pittsburg; M. J. Rotkow, Savannah; F. H. Schnauss, Cecil; W. W. Sharpe, III, Waycross; J. G. Sharpley, Savannah; J. A. Simpson, Jr., Clarksville; J. M.

Smith, Jr., Cochran; V. S. Steele, Eastman; T. B. Taylor, Douglasville; C. G. Thomason, Bolton; A. G. Thermond, Matthews; W. H. Wall, Ellaville; A. C. Ward, Lincolnton.

The members of the Woman's Auxiliary at Winder entertained the doctors of Winder at a fish supper on May 15th.

Dr. G. Lombard Kelly, Augusta, spoke at a meeting of the Exchange Club on May 18th.

The Georgia Court of Appeals on May 27th affirmed the conviction by the Cobb County Superior Court of G. C. Lyda, so-called "cancer specialist". He was fined \$500.00 and given a sentence of eighteen months. The sentence was suspended and he was placed on probation under Dr. J. E. Lester of Marietta.

Post-graduate instructions will be given on five successive days at the places and on dates mentioned as follows: Valdosta, June 19th; Statesboro, June 26th; LaGrange, July 3rd; Athens, July 10th; Rome, July 17th. The lectures will be sponsored by the extension division of the University of Georgia Medical Department, Emory University School of Medicine, State Board of Health and the Medical Association of Georgia.

Dr. H. L. Tippins, formerly of Savannah, has moved to Baxley and opened offices for the practice of medicine and surgery.

The Progress of the Medical Association of Montana under the caption "Membership" publishes the following in its April 28, 1933, issue: "The value of membership in the Medical Association of Montana depends upon the individual and his ideas of life. No estimate can be placed in dollars and cents. But, if no such organization existed, what would be the circumstances under which you practiced? Read the short article on the character of the anti-medical legislation introduced in the past session. If the Association had not been active and had no friends among the laity, it is my guess those measures would have become laws. Your membership depends upon the payment annually of a nominal fee. In what club or lodge to which you belong is the fee so small? They may give you relaxation and social pleasure, but the Medical Association gives you protection which makes the conditions under which you work pleasant and productive, for the benefit of the public, your family and yourself."

Hon. Henry A. Wallace, Washington, D. C., Secretary of Agriculture, by the direction of President Roosevelt, has submitted to the Department of Justice suggestions for the revision of the present Food and Drugs Act. The most important proposal is for

the expansion of the Act to include cosmetics and to regulate advertising of foods, drugs and cosmetics.

The Clinic Committee of the Chatham-Savannah Tuberculosis Association entertained the members of the Medical Staff, June 1st, to supper at the Parish Hall of St. Paul's Episcopal church, Savannah. Dr. R. V. Martin, Savannah, Chief of the Medical Staff, gave a brief history of the tuberculosis work in Savannah and Chatham county; Dr. J. L. Elliott, Savannah, spoke on the "Technic of the Treatment of Tuberculosis"; Dr. H. H. McGee, Savannah, talked on "The Importance of the Use of the X-Ray in Treatment of the Disease".

Dr. John M. Sigman, Macon, announced on May 30th that as a contribution to recovery from the depression he had cancelled more than \$50,000.00 on accounts due him.

The Coweta County Medical Society has been reorganized. The purposes as mentioned in the Newnan Herald are: "To promote a friendly understanding among its members, enlighten and direct public opinion in regard to medical problems, so the profession will become more capable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life."

The Georgia Medical Society, Savannah, has printed a history of its organization as a contribution to the bicentennial celebration. The work was compiled by Mrs. William Shearouse.

Dr. J. M. Barnett, Albany, Chairman of the Dougherty County Board of Health, stated at a recent meeting of the Board that malaria had become a rare disease in Dougherty county and only a few cases had been reported within the past two years. Dr. Hugo Robinson, Albany, Dougherty County Commissioner of Health, reported that May had been a busy month and that in co-operation with the Parent-Teacher Association many school children and those of pre-school age were examined.

Dr. Albert F. Saunders, Valdosta, will spend several weeks in New York City doing post-graduate work.

If interested in a location for a physician, write to the Secretary-Treasurer of the Association.

Dr. Wm. H. Luedde, St. Louis, Director of the Department of Ophthalmology of the Saint Louis University School of Medicine, was the recipient of the Leslie Dana Gold Medal on June 20th, which was awarded to him for the most outstanding achievements in the prevention of blindness and the conservation of vision.

The Georgia Medical Society met on June 13th. Dr. T. J. Charlton, Savannah, read a paper entitled "Treatment of Hypertension"; Dr. C. F. Holton, Savannah, gave case report, "Hodgkin's Disease."

The Ware County Medical Society met in the Directors room of the Y.M.C.A. building, Waycross, June 7th.

The Jackson-Barrow Counties Medical Society met at Jefferson, June 5th. Dr. S. A. Boland, Jefferson, read a scientific paper. The next meeting will be held on July 3rd.

Dr. and Mrs. W. P. Coffee, Fitzgerald, entertained the members of the Ben Hill County Medical Society at a fish fry on June 6th.

The Tri Medical Society and the Randolph County Medical Society held a joint meeting at Cordry's Mill on June 22nd. The scientific program consisted of a symposium on "Malaria". The members and their wives were entertained at a "Dutch Style" fish fry.

The New York Polyclinic Medical School and Hospital, New York City, had as its guest speaker on June 19th, Dr. Roberto Alessandri, Professor of Surgery at the Royal University of Rome. Dr. Alessandri spoke on "Post-operative Peptic Ulcer with Motion Picture Demonstration." Other members of the profession joined in a general discussion.

ACCEPTED ARTICLES

To the Editor:

In addition to the articles enumerated in our letter of April 29th the following have been accepted: Lederle Laboratories, Inc.

Ampules Glucose (U. S. P. Dextrose) Solution-Lederle, 20 cc.

Ampules Glucose (U. S. P. Dextrose) Solution-Lederle, 50 cc.

Ampules Glucose (U. S. P. Dextrose) Solution-Lederle, 100 cc.

Parke, Davis & Co.

Antipneumococcic Serum (Felton) Type I.

Erysipelas Streptococcus Antitoxin Refined and Concentrated—P. D. & Co., 20 cc. syringe package.

Sal-Ethyl Carbonate.

Tablets Sal-Ethyl Carbonate, 1 gr.

Tablets Sal-Ethyl Carbonate, 5 grs.

Tablets Sal-Ethyl Carbonate with Amidopyrine.

PAUL NICHOLAS LEECH, M.D.,

Secretary Council on Pharmacy and Chemistry,
American Medical Association.

Chicago, Ill.

May 27, 1933.

TRUTH ABOUT MEDICINES NEW AND NONOFFICIAL REMEDIES

Chlorbutanol (Hydrous)—Merck.—A brand of chlorbutanol—N. N. R. (New and Nonofficial Remedies, 1933, p. 137) containing one molecule of water in two of chlorbutanol. It is used in the preparation

of aqueous solutions. Merck & Company, Inc., Rahway, N. J.

Chlorbutanol (Anhydrous)—Merck.—A brand of chlorbutanol—N. N. R. (New and Nonofficial Remedies, 1933, p. 137) for use in the preparation of oil solutions. Merck & Company, Inc., Rahway, N. J.

Neocinchophen—Merck.—A brand of neocinchophen—N. N. R. (New and Nonofficial Remedies, 1933, p. 141). Merck & Company, Inc., Rahway, N. J. (Journal A. M. A., May 27, 1933, p. 1685).

BOOK REVIEW

Primer on Fractures, published by the American Medical Association and prepared by the Co-operation Committee on Fractures of the A. M. A. This book is now in its third edition and has been received with much enthusiasm by the profession. It is a sixty-seven page volume and contains twenty-one large illustrations, each of these having several different cuts and charts to emphasize the important points. This book is in no way a text book or exhaustive review of the literature of any orthopedic subject, but is exactly what its name implies—a primer dealing with the important and practical procedures to be adhered to in the treatment of simple fractures by the practicing physician. It is well worth the purchase price of \$1.00 to have at hand such an authoritative and concise review of this subject.

EDGAR BOLING, M.D.

NOTICE

To Taxpayers Under the Harrison Narcotic Law,
As Amended:

Blanks for registry under the narcotic act, for the fiscal year beginning July 1, 1933, have been mailed all taxpayers in Georgia.

These forms should be executed and returned to the Collector of Internal Revenue, in Atlanta, Georgia, with the tax, on or before July 1st, or penalty attaches.

Tax should be in the form of certified personal check or money order.

J. T. ROSE, Collector.

June 9, 1933.

Atlanta.

Hon. W. G. Campbell, Chief, announces that the Food and Drug Administration caused the seizure of 140 consignments of foods and drugs during May which were found to violate the national pure food and drug law. The Administration also sent to the Solicitor of the Department of Agriculture recommendations for the prosecution of cases involving 40 stocks of foods, drugs and insecticides. These included apples carrying traces of arsenic and lead, coffee containing undeclared cereal, and numerous other products. Notification was received from Federal courts of the termination of 19 criminal prosecutions of violators resulting in fines ranging from \$5.00 to \$600.00.

SCIENTIFIC EXHIBITS
MACON SESSION
May 9-12, 1933

LOBAR PNEUMONIA IN NEGRO CHILDREN
WM. W. ANDERSON, M.D.
DON F. CATHCART, M.D.
Atlanta

In the past few years we have been impressed by the large number of frank lobar pneumonias occurring in the negro children admitted to the Grady Hospital, Emory University Division. The major portion of the exhibit was taken up with a study of these negro children.

On account of one or two missing records, or one or two incomplete records, the following one hundred admissions to the hospital are not absolute consecutive admissions. But they do represent recent admissions, and we feel that we can refer to them as consecutive admissions, and study them from this standpoint.

Of one hundred children with pneumonia admitted to Grady Hospital in recent months, eighty-five had lobar pneumonia and fifteen bronchopneumonia. We are at a loss to explain the high percentage of lobar pneumonia. It may be possible that this is a discrepancy in that the bronchopneumonias are not admitted to the hospital. Perhaps the children with lobar pneumonia are sicker, and hence hospital admission is sought.

Twenty-three of these eighty-five children were less than one year of age. The next highest age incidence, nineteen, occurred between one and two years of age. This does not conform to standard text books. Holt reports 65 per cent of lobar pneumonia occurring in children between two and six years of age, and only 15 per cent occurring under one year of age. Practically 50 per cent of our series are under two years of age.

The site of involvement is of interest. In 30 instances the right upper lobe was involved. The next highest number, twenty-one, had a right lower lobar pneumonia. The right middle lobe was involved in twenty instances, the left lower twenty times, and the left upper only eight. The impression we have when these children are examined is that we are dealing with pulmonary tuberculosis, on account of the occurrence at the apices. This impression is not borne out at autopsy at all. Needless to say, the diagnoses are confirmed (and very frequently changed entirely) by at least one, and frequently several, x-ray examinations.

We are also struck by the rapid fall in fever shortly after admission to the hospital. Most of them have normal temperatures within forty-eight to seventy-two hours. From actual observation the greatest duration (13 children) is five days. From (a) history plus (b) actual observation, thirteen children of the eighty-five were ill seven days, and sixteen of the eighty-five ill for nine days. Twenty-nine ended by

crisis, forty by lysis. The mortality was 10 per cent.

We realize that this is a small number of children to study, but we do feel that they show some unusual findings in that they are extremely ill on admission, they either get well rather rapidly, or die. Unless it is purely incidental in this small series of children, we cannot account for the numerous involvements of the right upper lobe of the lung.

TOTAL LARYNGECTOMY

MURDOCK EQUEN, M.D.
Atlanta

The exhibit consisted of a patient with an artificial larynx and reproduction of MacKenty's illustrations of the technic for total laryngectomy.

The patient was a man of forty-five years, had become hoarse about four years previously. In 1931 a biopsy in another state had been pronounced non-malignant. Biopsy diagnosis of epithelial carcinoma Grade IV was made by Drs. Jack C. Norris and E. L. Bishop in March, 1932, and laryngofissure with wide dissection of the growth was done by me. The immediate results were satisfactory and in two months his speech was improved. He was examined at frequent intervals, but no evidence of recurrence of the growth was noticed until a year after the original operation.

The new growth at that time was very small so in the absence of any palpable glands in the neck or x-ray signs of metastases to the lungs, total laryngectomy was promptly performed. Post-Operative convalescence was uneventful, and a month later he was supplied with an artificial larynx made by the Western Electric Company. He had already become sufficiently adept with this instrument to make him self understood without difficulty.

STATE TUBERCULOSIS SANATORIUM
ALTO

Mounted on three panels, each 30x40 inches, arranged semi-sexagonally on a table of suitable size, the State Tuberculosis Sanatorium displayed many photographs of the buildings, grounds, wards, sun decks, kitchens, dining rooms, play grounds, dairy, poultry equipment and many other interesting scenes of "Alto". On the reverse sides of these panels were displayed both paper and celluloid films.

No place in the Hotel Dempsey seemed to claim greater interest, except the hall where the scientific sessions were being held, than did this exhibit.

In addition to the above named, a complete artificial pneumothorax outfit was mounted on the table immediately on the front of the display table.

There was stimulated a genuine interest, both in the application of artificial pneumothorax in treatment of pulmonary tuberculosis and in the use of the paper film, if the favorable remarks made by the various groups that gathered in front of the exhibit from time to time is a correct index. Two distinct

attitudes seemed to prevail in the minds of the members of the Association present. First: The private practitioner should become proficient in the administration of collapse measures, especially artificial pneumothorax, in the treatment of tuberculosis; and that x-ray or fluoroscopic check up is essential to determine the extent of collapse effected as well as the progress of the patient; and second: That the guarded use of paper film which costs less than fifty per cent of celluloid will make possible the freer use of the x-ray at a greatly reduced cost.

COMMERCIAL EXHIBITS

Macon Session

May 9, 10, 11, 12, 1933

GERBER PRODUCTS DIVISION, FREMONT CANNING COMPANY FREMONT, MICHIGAN

The new Gerber product, cereal cooked in whole fresh milk and strained, ready for feeding, was on display in Gerber product display at the Macon session. This cereal is intended as the first semi-solid food. The combination of whole grain cereals and added wheat germ cooked in whole fresh milk and then strained so as to retain the nutrients of the whole grain. The cooked and strained cereal is of such fineness that clinical trial with infants four and five weeks of age, who had been difficult feeding cases, have shown good results.

Information and a display of all Gerber products, cereal, vegetables, and prunes, were shown. Booklets are available: one on infant feeding for distribution by physicians in their practice, and several publications on the use of these products in therapeutic diets.

MEAD JOHNSON & COMPANY EVANSVILLE, INDIANA

When E. Mead Johnson founded Mead Johnson & Company, almost thirty years ago, he had more ideals than money. In those days, pediatrics was a comparatively new specialty, beset with difficulties on all sides, not the least of which was outside interference by grandmothers, neighbors, and patent "baby food" makers who reached the mother first with the aid of birth lists and who gratuitously taught her how to feed her baby from "directions on the package".

Mr. Johnson produced Dextrin-Maltose in response to the active demands of pediatricians for a carbohydrate that would be tolerated better, and without the digestive disturbances that attended the use of the "sugars" then available, principally sucrose and lactose.

He gave the doctors what they asked for, in Dextrin-Maltose, and went a step further by giving them something they did not ask for, but which time has proved to be eminently acceptable and helpful—the Mead Policy, under which, now as then, no Mead Product is advertised to the laity or carries dosage instructions. Mr. Johnson early evaluated the worth of viosterol, and it is a matter of no small pride that

much of the first scientific work on viosterol (then "actrol") was conducted in the Mead Johnson Research Laboratory, long before the newer competition by other American manufacturers.

He anticipated the era of over-enthusiasm and exploitation of viosterol and of vitamins in general, and early sounded a warning against such misdirected zeal, the recent history of which emphasizes the importance of his stand that vitamin therapy, like infant feeding, should rest with the physician and not with commercial interests.

DR. P. PHILLIPS COMPANY ORLANDO, FLORIDA

After many years of research, the Dr. Phillips Company of Orlando, Florida, has developed a process, on which it holds the patent rights, to can Pure Orange Juice, Pure Grapefruit Juice and Fancy Grapefruit Hearts, retaining to a high degree the Vitamin "C" and other nutritional values of the fresh fruit. This is surely good news for the medical profession as the need of a good packaged orange juice and grapefruit juice has been felt for a long time.

Considerable experiments have been made on Dr. Phillips' canned citrus products to determine their relative food value as compared with the fresh fruit bought at the retail grocery stores. In each one of these tests it was found that all three products would be 3-starred in vitamin parlance, i.e., all must be considered as very rich in Vitamin "C". This is no doubt due to the method of harvesting only after full maturity has been obtained on the trees, together with the prompt utilization of the fruit after it is picked.

Dr. Phillips has for over thirty years been an outstanding figure in Florida in the growing of oranges, grapefruit and tangerines. He owns several thousand acres of groves, operates a number of fresh fruit packing houses and one of the most modern and sanitary canning plants in the state. Great care is taken to prepare the fruit in the most sanitary manner, all the workers being required to wear rubber gloves and white uniforms.

Dr. Phillips' Pure Orange Juice and Pure Grapefruit Juice can be recommended for all uses where the fresh fruit would be used. The Orange Juice is especially recommended for infant and child feeding on account of the fruit being tree ripened and fully matured.

These products may now be purchased at any retail grocery store and are very reasonable in price.

If interested in any form of automobile insurance, write the office of the Association. You may secure various forms of protection at greatly reduced cost. However, the company has an excellent rating and pays small claims as well as large. Many companies bar all claims for less than \$25.00 and sometimes \$50.00. Always write the Association office when there is any possibility of obtaining information or assistance.

COX COLLEGE

SUBURB OF ATLANTA

Cox College, a standard Junior College for girls, opens September 14th, and the traditions that made Cox one of the most famous schools for girls throughout the South, will be maintained. High School and two years of college work and unsurpassed advantages in music will be offered.

Week-end camp privileges—swimming, and all outdoor sports.

Our prices are moderate. Thirty-one scholarships are offered to deserving girls.

For catalog, write Cox College, College Park, Ga.

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More than eight years' experience in radiography, fluoroscopy, x-ray therapy and physical therapy. Experienced stenographer and bookkeeper. Employed at present by prominent roentgenologist. Desires change for good reason. References furnished from present employers. Address M. F., care of the Journal.

DRUG ADDICTS

Drug and Alcoholic patients are humanely and successfully treated in Glenwood Par Sanitarium, Greensboro, N. C.; reprints of articles mailed upon request. Address W. C. Ashworth, M.D., Owner, Greensboro, N. C.

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J. C. MASSEE, M.D.

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GOAT'S MILK

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Milk
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EVERY GOAT

In Our Herd Tested for
TUBERCULOSIS (A Disease
Goats Rarely Ever Have)

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CHAMBLEE-DUNWOODY ROAD

THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XXII

Atlanta, Ga., July, 1933

Number 7

PROCEEDINGS

HOUSE OF DELEGATES

Eighty-fourth Annual Session

MEDICAL ASSOCIATION OF GEORGIA

May 9-12, 1933, Hotel Dempsey,

Macon, Georgia

REPORTS OF OFFICERS AND COMMITTEES

REPORT OF PRESIDENT

For several years it has been a pleasure to work as I have for the Medical Association of Georgia, and particularly my work as Councilor and President. I have never been to a Medical Meeting that I didn't learn something.

I have attended every Committee meeting that I knew of; have attended each Councilors meeting and each public meeting that I was asked to attend. I may have missed some on account of being confined in the hospital for two and one-half months.

All meetings were interesting. The legislative body of the state should make the State Tuberculosis Sanatorium laws more specific.

I have attended each district meeting one time, except the First, Fourth and Tenth District. My reason for not attending the First District meeting: I felt that under the existing economic condition and the First Vice-President being there, also the Delegate to the A. M. A., it was not necessary, Dr. Morrison performed my duties there. My reason for not attending the Fourth District: if they had a meeting I did not know it. My reason for not attending the Tenth District meeting: I was away, unavoidably, and asked Dr. Richardson to attend. Dr. Richardson also attended the Ninth District meeting and some others. He has been, during the year, a great help to me and has always been my friend, and I regard a friend more than *all* else during this human life.

I attended, at Alto, the meeting to dedicate the Thomas County Building to the State of Georgia. I wish a great many more counties could build a cottage to help care for their tuberculosis patients.

I have met with the advisory committee of the Woman's Auxiliary once and we all should be proud of our Auxiliary. They will have a report to the House of Delegates.

All of our committees have done their work well and should be congratulated.

I appointed Committees to consider Maternal Mortality and Infant Deaths.

The Chairman of each of the different Committees will make his report.

I have appointed a fraternal delegate and alternate

to each State Society adjoining the State of Georgia.

Our State Department of Public Health has done all one could ask of it, and I am glad to report we have now a State Board of Health, comprised of eight doctors, one from each of eight Congressional Districts, two dentists and two pharmacists, from state at large.

I have only spent one night away from home attending these meetings.

I really think we should not pay the Presidents during good or bad times. It is all right to pay actual expenses as stamps, telephone, etc.

I hope the delegates will express their opinion on "Contract or Insurance practice and State Medicine" during this Session of the Medical Association of Georgia. I expect to say something about it in my address.

I want to thank Dr. Bunce and every other officer of the Association, and the members of the Association for their support. An officer does not mean anything unless supported by the members. He would be like a house built on the sand.

My statement of expenses during the year and this includes all expense:

The statement shows expenses\$143.71

M. M. HEAD, M.D., *President*

REPORT OF PRESIDENT-ELECT,

The past year has been one of great interest for your incoming president. It has been spent in observation and study of one of the most critical periods of medical history, in which we have seen physicians as well as others confronted with many serious and complex problems.

We have seen many movements afoot that are endeavoring to alter the relationship between the patient and the physician that has existed in the past. They have come in the guise of corporate practice. Group practice, governmental practice, contract practice, health insurance, all tending toward the socialization of medicine and state control, and most of them marked with the taint of commercialism.

In November 1932, the committee which had been selected to study the costs of medical care made available its results of five year study, made at an expense of a million dollars. It presents two divergent viewpoints in the forms of a majority report which believes that society can best be served through group practice centered around hospital units, and a minority report which maintains its firm conviction that the practice of medicine is inherently an individual responsibility.

In commenting upon this, our distinguished secretary, Mr. Olin West, of Chicago, has said, "The institution of medicine has not sprung up in a day, but was built through the devoted and progressively efficient service of an intelligent and humane profession over a period of hundreds of years. I am not in sympathy with any suggestion that any group of physicians should feel it incumbent upon them to suggest any plan or any procedure that is designed to overthrow or to undermine the foundation of the institution of medicine whose record for worthy accomplishment has never been surpassed."

Also the words of our distinguished President, Dr. E. H. Cary, "The medical profession treasures its ancient home of Hellenic origin; its straight lines are redolent of beauty; none of us complain of its architecture but, as time goes by, like all homes it needs repolishing. Its superstructure stands upon a foundation which time has scarcely marred. The builders of today, like the builders of yesterday, are trying to keep this foundation sound and secure.

The portals of this home have always been flung ajar to extend gracious hospitality to all who need its beneficent bounty. We are proud to claim it our habitat, and we should protect its beauty, culture and integrity with our life blood."

That is the essence of the firm conviction that has come to me through this year of observation and I take my stand by the side of organized medicine and issue a challenge to those who would take advantage of present chaotic conditions to override its objections to the socialization of medicine.

C. H. RICHARDSON, M.D.
President-Elect

REPORT OF SECOND VICE-PRESIDENT

September 21, 1932, I attended the 9th District Medical Meeting at Jefferson, Georgia. The attendance was very good and several interesting papers were read. There were a number of visiting doctors from other Societies.

Following the Scientific program the Medical Society and auxiliary of the 9th district were entertained at a very fine barbecue luncheon, by the Jackson County Medical Society and auxiliary. During the lunch the 9th district was invited to meet with the Hall County Medical Society at Gainesville, Ga.

February, 1933, I attended a meeting of the committee on Maternal Mortality and Infant deaths, at the Academy of Medicine, Atlanta. There were not more than half of the members present. We had a discussion of, first, the forms upon which such reports are to be made, and how to get the doctors to fill out and return the reports, so that the committee can make a satisfactory report. Second the discussion of Maternal deaths. Due to this being a new line of work, and not yet well organized, and only a portion of the committee present, we adjourned, hoping to have another meeting this summer.

March 15, last, I attended the spring meeting of

the 9th District Medical meeting, at Gainesville. Several good papers were read; two from members of the Fulton County Medical Society. We also had present several other members from the Fulton County Society. It was our pleasure to have with us at this meeting our President Dr. Marvin Head. Following the scientific program, we were entertained at a very fine luncheon, by the Hall County Society, in the Dixie Hunt Hotel. During the lunch hour the subject of the History of Medicine in Georgia was brought up by Dr. L. G. Hardman. Several spoke concerning doctors of Georgia, who have added to the world's successful practice of medicine and surgery.

May 3, 1933, by invitation from a member of the Habersham Medical Society, I attended a meeting, at which the Habersham Society and Auxiliary entertained the members and auxiliary of the Hall County Society at a very fine luncheon, in the Sanatorium, at Alto, Georgia. Following the dinner a fine paper was read by the doctors of the Sanatorium, on Bronchiectasis and Tuberculosis. I did not see all portions of the Sanatorium, but all I saw was very nice indeed.

DAVID H. GARRISON, M.D.
Second Vice-President

REPORT OF THE SECRETARY-TREASURER FOR THE FISCAL YEAR

May 1st, 1932 to April 30th, 1933

It is with profound sadness that I report the loss of fifty of our members through death since our last annual session, which is the largest number during any year since the founding of our Association in this city, eighty-four years ago. This loss has been proportionately greater in the rural districts and smaller cities, because for a number of years a larger proportion of the younger men have located in the more thickly settled centers of population thereby causing a gradual rise in the average age of the physicians in the smaller communities.

There has been a gradual decrease in the number of physicians in the private practice of medicine in the entire state. However, statistics in the United States show that the number of physicians is increasing much faster than the population and that in the course of the next score of years at this present rate of increase there will be an over supply of physicians.

Membership

On May the first, 1932, we had 1,101 members in good standing, this was increased to 1,501 by December 31st, 1932. On May the first, 1933, we had 911 members in good standing, however, during the first six days of May, dues were received from 136 members and by May the ninth 13 additional, bringing our total up to 1,060 which is only 41 less than we had last year. Because of the brightening financial outlook it is reasonable to expect that our total membership will be as large for this year as it was last year.

Medical Defense

From May 1st, 1932 to April 30th, 1933 the Association has defended twelve suits for alleged mal-

practice against fourteen of our members.

The suits were filed in the following counties:

DeKalb, 1; Fulton, 3; Hall, 2; Laurens, 1; Lowndes, 1; Richmond, 1; Spalding, 1; Wayne, 2.

The total amount of damage for which the plaintiffs sued was \$249,000. No suit has been lost by the Association.

SUMMARY OF FINANCIAL STATEMENT

Read first page of financial statement.

It will be noted that on May the first of this year we had \$591.00 less in the bank than we had on May the first last year, however, a deposit on May the sixth of \$1,032.85 brought our bank balance up to \$441.85 more than on May the first last year.

In connection with the financial report there are three items which deserve special mention:

1. The Association has received and spent more than a thousand dollars from members who have subscribed to the DeLuxe Edition of "A History of Medicine in Georgia". It is therefore obligated to see to it that this History is published and a copy of this special edition delivered to each of these subscribers.

2. Up to the present time the attorneys for the Association employed by the Committee on Medical Defense have received \$250.00 less than they received last year.

3. As there has been no session of the American Medical Association since our last annual session, the Association has not paid anything to its delegates. There will be due and payable to them a \$100.00 each in June, making a total of \$300.00.

THE JOURNAL ACCOUNT

The total receipts for the Journal account during this fiscal year were \$6,686.57 of which amount \$3,451.38 was received from subscriptions and \$3,235.19 from advertising. The total disbursements on the Journal account were \$6,475.16, leaving a net profit of \$211.41.

UNFINISHED BUSINESS

Amendments to the Constitution and By-Laws

PROPOSED AMENDMENTS TO CONSTITUTION

Article IX, Section 1, be amended to read as follows: "Section 1. The officers of the Association shall be a President, President-Elect, two Vice-Presidents, a Secretary-Treasurer, a Parliamentarian, and one Councilor from each congressional district in the State."

Article IX, Section 2, be amended to read as follows: "Section 2. The officers, except the Secretary-Treasurer, Parliamentarian and Councilors, shall be elected annually, provided that after the annual session of 1928 a President-Elect and not a President shall be elected annually. The President-Elect shall assume office as President immediately after the next annual session following his election. The terms of the Councilors shall be for three years, as may be arranged, viz., the Councilors for the first, second, third, and fourth districts for three years; those for the fifth, sixth, seventh, and eighth districts for one year; those for

the ninth and tenth districts for two years. The Secretary-Treasurer shall be elected for a term of five years, and the Parliamentarian for a term of three years. All these officers shall serve until their successors are elected and installed. (1933).

Members—Proposed Amendment to By-Laws

By-Laws: Chapter 1, Section 4, Membership. Proposed Amendment. It is proposed to amend Chapter I, Section 4, of the By-Laws of the Association by adding the following: "In addition to the regular paid and honorary members as now carried on the roster of constituent county societies and the Association; county societies may elect other members to be known as "affiliate, associate, graduate or interne" members. Such members may be elected by any county society without the payment of dues and reported to the Secretary-Treasurer of the Association. All such members shall be carried on the roster of members of the Association with the privilege of attending any and all meetings of county, district societies and the Association, but will not be eligible to vote, hold office or serve as committeemen in any of the constituent societies or the Association." All such members may be designed as "associate members" on the roster of members of the Association.

New Business

Through the efforts of the Association under the direction of its Committee on Public Policy and Legislation, the State Board of Health was recreated by the recent Legislature. Under the new Act it will be necessary for the Association, at this session to nominate two members from each congressional district from which list the governor will select one member of the new State Board of Health from each district.

Conclusion

Notwithstanding the trying times through which we have been passing the work of the Association has gone on smoothly on account of the renewed energy, enthusiasm and hard work of the officers committees and the loyalty of the members. The work which has been accomplished will be presented to you in detail by the other officers and chairmen of the standing and special committees. As your Secretary-Treasurer I have earnestly endeavored to fulfill, to the best of my ability, the duties assigned me under the Constitution and By-Laws, Resolutions in the House of Delegates, directions of the Council and our President, keeping in mind always that I am the humble servant of the Association, working for its material good, its power and glory.

ALLEN H. BUNCE, M.D.

Secretary-Treasurer

The total receipts of the Association for the fiscal year are as follows:

Dues	\$8,021.73
Advertising	3,235.19
Commercial Exhibits	281.25
Subscriptions	13.50
Subscription for History	10.00
Dividends from closed banks	3.75

Total.....\$11,565.42

FINANCIAL STATEMENT
MEDICAL ASSOCIATION OF GEORGIA

Receipts

May 1, 1932, cash on hand	\$ 6,097.86
May 1, 1932 to April 30, 1933, Receipts	11,565.42
Total	\$17,663.28

Disbursements

May 1, 1932 to April 30, 1933,	\$12,156.42
April 30, 1933, cash on hand	5,506.86
Total	\$17,663.28

DISBURSEMENTS

May 1, 1932 to April 30, 1933

No.	Name	Amount
1784	Alliance Printing Co. Printing and mailing 2100 copies of the April, 1932 issue of the Journal	\$343.70
1785	J. N. Reisman Rent for May, 1932	20.43
1786	E. K. Large, Postmaster Postage	30.00
1787	The Letter Shop Multigraphing letters for the Presi- dent, Dr. A. G. Fort in reference to Health Education and Koch; letters to county secretaries to report delegates; doctors on program to read and dis- cuss papers; Dr. W. A. Selman letters to members in the Fifth District; Dr. Jas. E. Paullin letters to officers of county societies and delinquent mem- bers; letters to county secretaries with Delegate's Credential Cards	19.60
1788	Southern Bell Telephone & Telegraph Co. Telephone account for April, 1932....	9.60
1789	Auld's Inc. "Badge of Service" for the President, Dr. A. G. Fort	3.34
1790	Dixie Seal & Stamp Co. Circle stamp in reference to the Sa- vannah meeting	2.50
1791	Allen H. Bunce Salary as Secretary-Treasurer for April, 1932	150.00
1792	H. L. Rowe Salary as Executive Secretary for April, 1932	175.00
1793	Miss Annie Jacks Commission on advertising contract....	16.50
1794	J. A. Redfearn Expenses incurred as Councilor for the Second District	25.00
1795	E. K. Large, Postmaster Postage	30.00
1796	Miss Annie Jacks Commission on advertising	6.12
1797	W. C. Alvarez Expenses as invited guest at the Sa- vannah meeting	126.98
1798	Mrs. Irene H. Snyder Payment on reporting Savannah meet- ing	150.00
1799	Price & Mapes Painting signs for the Association and scientific exhibitors at the Savannah meeting	31.50
1800	Miss Josephine Besselieu Work on badges and at Registration desk at Savannah meeting	18.00
1801	Bright Brooks Lumber Co. Lumber and beaver board for scientific exhibits	38.10
1802	H. L. Rowe Transportation to and from Savannah	

meeting, \$26.85; hotel and other ex- penses, \$15.35	42.20
1803—Cash Taxi for transporting supplies, porters and help with commercial and scien- tific exhibits, \$9.45; drapery bought by Dr. E. A. Bancker for scientific exhibits, \$4.15	13.60
1804—Hotel DeSoto Carpenter and electrician for work on scientific exhibits	10.00
1805—Miss Annie Jacks Commission on advertising contract....	22.50
1806—Jas. E. Paullin Postage used in mailing letters in ref- erence to program for Savannah meet- ing	4.50
1807—Alliance Printing Co. Printing and mailing 2100 copies of May, 1932 issue of the Journal	304.13
1808—Alliance Printing Co. Printing programs for the Savannah meeting	79.00
1809—Southern Bell Telephone & Telegraph Co. Telephone account for May, 1932	8.25
1810—Leigh Sign and Advertising Co. Painting two signs for scientific ex- hibits at the Savannah meeting	4.00
1811—E. K. Large, Postmaster Postage for mailing the Journal	25.00
1812—Geo. R. Pearson Co. Printing 1000 registration cards for the Savannah meeting	3.75
1813—Wolverine Art Shops Badges for the Savannah meeting	48.00
1814—The Letter Shop Multigraphing letter for Dr. A. G. Fort to members of the Woman's Auxiliary; letters to members of the House of Delegates; letters to mem- bers in reference to reduced rates over Central of Georgia Railroad to the Savannah meeting	11.00
1815—Allen H. Bunce Salary as Secretary-Treasurer for May, 1932	150.00
1816—H. L. Rowe Salary as Executive Secretary for May, 1932	175.00
1817—Wm. Mithoefer Expenses as invited guest at the Sa- vannah meeting	75.00
1818—Miss Annie Jacks Commission on advertising order	27.00
1819—Hotel DeSoto Expenses of Dr. Walter C. Alvarez and Dr. Wm Mithoefer for one day during the Savannah meeting	6.00
1820—Southern Engraving Co. Cuts for illustrations used in the Journal	68.10
1821—J. N. Reisman Rent for June, 1932	17.50
1822—Lester's Inc. Typewriter ribbon, wrapping paper, Gem clips and paper	4.55
1823—Western Union Telegraph Co. Telegraph account for May, 1932	4.24
1824—Southern Press Clipping Bureau News clippings for April and May, 1932	10.00
1825—E. K. Large, Postmaster Postage	30.00
1826—Southern Bell Telephone & Telegraph Co.	

Telephone account for June, 1932.....	9.20	1853—The Letter Shop	
1827—Alliance Printing Co.		Multigraphing 800 copies of legisla-	
Printing 1000 reprints of Presidential		tive program and 600 letters for the	
Address for Dr. Arthur G. Fort, Presi-		Committee on Public Policy and Leg-	
dent 1931-32.....	24.00	islation.....	8.65
1828—The Letter Shop		1854—Bryan, Middlebrooks & Carter, Attys.	
Multigraphing letters to county secre-		Traveling and other expenses attend-	
taries in reference to History for Dr.		ing court at Jesup in suit of Mrs.	
Frank K. Boland, Chairman.....	1.25	Cilla Warren vs. Drs. Colvin and	
1829—Southern Engraving Co.		Ritch; traveling and other expenses	
Copper cuts for illustration in the		attending court at Griffin in suit of	
Journal.....	16.03	Cox vs. Dr. A. H. Huckaby.....	41.32
1830—Allen H. Bunce		1855—Allen H. Bunce	
Salary as Secretary-Treasurer for June,		Salary as Secretary-Treasurer for Au-	
1932.....	150.00	gust, 1932.....	150.00
1831—H. L. Rowe		1856—H. L. Rowe	
Salary as Executive Secretary for June,		Salary as Executive Secretary for Au-	
1932.....	175.00	gust, 1932.....	175.00
1832—Alliance Printing Co.		1857—Alliance Printing Co.	
Printing and mailing 2100 copies of		Editorial staff—Associate Editors for	
the June, 1932 issue of the Journal....	303.19	reprints.....	50.00
1833—M. M. McCord		1858—Alliance Printing Co.	
Expenses incurred as Councilor to		Printing and mailing 2100 copies of	
July, 1932.....	11.00	the August, 1932 issue of the Journal	298.00
1834—Miss Annie Jacks		1859—Clerk of Superior Court, Fulton	
Commission on advertising.....	5.62	County	
1835—J. N. Reisman		One-half the cost for reporting trial	
Rent for July, 1932.....	17.50	of case in suit of Dr. Willis E. Ragan	
1836—Southern Press Clipping Bureau		and Jacobs' Pharmacy Co., in Fulton	
News clippings for June, 1932.....	5.00	County Superior Court, No. 85808..	5.50
1837—E. K. Large, Postmaster		1860—Lester's Inc.	
Postage.....	30.00	White bond paper for Committee on	
1838—Mrs. Irene H. Snyder		Public Policy and Legislation, paste	
Balance for reporting the Savannah		and typewriter ribbon.....	7.25
meeting, May 17-20, 1932. Original		1861—Southern Press Clipping Bureau	
and carbon copies of proceedings		News clippings for August, 1932.....	5.00
of the House of Delegates and gen-		1862—Southern Engraving Co.	
eral meetings with minutes of the		Cuts for illustrations in Journal.....	36.09
Council.....	324.43	1863—E. K. Large, Postmaster	
1839—J. F. Thompson		Postage.....	30.00
1500 letterheads and 1500 envelopes		1864—Marvin M. Head	
engraved for President, Dr. M. M.		Honorarium for President, 1932-33..	150.00
Head, official stationery.....	22.50	1865—Miss Annie Jacks	
1840—Southern Engraving Co.		Commission on advertising.....	5.62
Cuts for illustrations in Journal.....	46.38	1866—Alliance Printing Co.	
1841—Southern Bell Telephone & Telegraph		Printing and mailing 2100 copies of	
Co.		the September, 1932 issue of the	
Telephone account for July, 1932....	9.30	Journal.....	303.19
1842—Atlanta Envelope Co.		1867—Southern Bell Telephone & Telegraph	
11,000 envelopes for mailing the		Co.	
Journal.....	42.35	Telephone account for Sept., 1932....	8.75
1843—Allen H. Bunce		1868—The Letter Shop	
Salary as Secretary-Treasurer for July,		Furnishing stationery and multigraph-	
1932.....	150.00	ing 2000 notices sent to delinquent	
1844—H. L. Rowe		members.....	10.55
Salary as Executive Secretary for July,		1869—Southern Engraving Co.	
1932.....	175.00	Cuts for illustrations in Journal.....	6.84
1845—Alliance Printing Co.		1870—Bryan, Middlebrooks & Carter, Attys.	
Printing and mailing 2100 copies of		Attorney's fees for Ed Quillian,	
the July, 1932 issue of the Journal....	304.22	Gainesville, in suit of Oliver Simmons	
1846—J. N. Reisman		vs. Dr. R. L. Rogers, Gainesville, and	
Rent for August, 1932.....	17.50	Dr. W. H. Quillian, Lula.....	50.00
1847—Southern Press Clipping Bureau		1871—Allen H. Bunce	
News clippings for July, 1932.....	5.00	Salary as Secretary-Treasurer for Sep-	
1848—Lester's Inc.		tember, 1932.....	150.00
Pencils, typewriter ribbon and paper..	3.35	1872—H. L. Rowe	
1849—E. K. Large, Postmaster		Salary as Executive Secretary for Sep-	
Postage.....	30.00	tember, 1932.....	175.00
1850—E. K. Large, Postmaster		1873—E. K. Large, Postmaster	
Postage.....	30.00	Postage.....	30.00
1851—Southern Bell Telephone & Telegraph		1874—Miss Annie Jacks	
Co.		Commission on advertising.....	5.40
Telephone account for August, 1932..	8.28	1875—Miss Annie Jacks	
1852—Alliance Printing Co.		Commission on advertising.....	9.75
6000 letterheads, 6400 envelopes for		1876—J. N. Reisman	
officers and committees.....	52.01	Rent for September and October,	

1877—Lester's Inc. Journal and index tabs for registering names and addresses by counties of paid members for 1933.....	35.00 2.95	1902—E. K. Large, Postmaster Postage.....	30.00
1878—E. K. Large, Postmaster Postage for mailing the Journal.....	25.00	1903—Southern Press Clipping Bureau News clippings for October and November, 1932.....	10.00
1879—Southern Press Clipping Bureau News clippings for September, 1932..	5.00	1904—Lester's Inc. Gem clips, twine, typewriter ribbon, writing and wrapping paper.....	3.60
1880—Addressograph Co. Addressograph ribbon.....	.93	1905—Western Union Telegraph Co. Telegraph account for November, 1932.....	4.60
1881—Alliance Printing Co. 2,000 membership cards for 1933....	16.00	1906—E. K. Large, Postmaster Postage.....	30.00
1882—Miss Annie Jacks Commission on advertising.....	13.50	1907—Southern Bell Telephone & Telegraph Co. Telephone account for December, 1932.....	6.40
1883—E. K. Large, Postmaster Postage.....	30.00	1908—Lester's Inc. 500 envelopes, typewriter ribbon and ledger.....	4.00
1884—Alliance Printing Co. Printing and mailing 2100 copies of the October, 1932 issue of the Journal	297.62	1909—The Letter Shop Multigraphing letters: County secretaries for roster of officers, delinquent members, county secretaries to correct proof for directory, letters for Dr. W. A. Selman to delinquent members in Fifth District.....	8.85
1885—Alliance Printing Co. 1000 advertising contract blanks and rate cards.....	17.75	1910—Alliance Printing Co. Blanks in reference to dues "Pink Slip" mailed with December issue of Journal.....	8.75
1886—Southern Bell Telephone & Telegraph Co. Telephone account for October, 1932	10.70	1911—Allen H. Bunce Salary as Secretary-Treasurer for December, 1932.....	150.00
1887—The Letter Shop Signature plate for Dr. M. M. Head, President, to use in multigraphing letters mailed to delinquent members and 1000 letters multigraphed.....	7.35	1912—H. L. Rowe Salary as Executive Secretary for December, 1932.....	175.00
1888—Atlanta Envelope Co. 10,000 No. 10 envelopes.....	33.40	1913—Alliance Printing Co. Printing and mailing 2000 copies of the December, 1932 issue of the Journal.....	291.25
1889—Southern Engraving Co. Double copper cut used as an illustration in the Journal.....	6.88	1914—American Surety Co. Premium on surety bond No. 237,-072-D for H. L. Rowe to September, 1933.....	5.00
1890—Allen H. Bunce Salary as Secretary-Treasurer for October, 1932.....	150.00	1915—Bryan, Middlebrooks & Carter, Attys. Retainers as attorneys for the Association to December 31, 1933.....	1000.00
1891—H. L. Rowe Salary as Executive Secretary for October, 1932.....	175.00	1916—E. K. Large, Postmaster Postage.....	30.00
1892—E. K. Large, Postmaster Postage.....	30.00	1917—E. K. Large, Postmaster Postage for mailing the Journal (deposit).....	25.00
1893—Miss Annie Jacks Commission on advertising.....	9.01	1918—Miss Annie Jacks Commission on advertising: Dockstaker, Dr. O. D. Hall, Eager & Simpson, Blackman Health Resort and J. N. Kalish.....	5.15
1894—Alliance Printing Co. Printing and mailing 2100 copies of the November, 1932 issue of the Journal.....	303.19	1919—Southern Engraving Co. Mounting two electros and cuts for illustrations, invoices 6251-6270-6271.....	27.04
1895—American Medical Association Special supplement to the Twelfth Edition of the American Medical Directory.....	5.00	1920—Southern Bell Telephone & Telegraph Co. Telephone account to January 11, 1933.....	6.58
1896—Southern Bell Telephone & Telegraph Co. Telephone account for November, 1932.....	7.80	1921—Bryan, Middlebrooks & Carter, Attys. One-half cost for reporting trial of case, Frank Meeks vs. Dr. Zach W. Jackson and Dr. F. P. Calhoun.....	3.60
1897—J. N. Reisman Rent for November and December, 1932 less charge of \$1.00 for moving telephone.....	34.00	1922—Atlanta Envelope Co. 10,000 letterheads and 15,000 envelopes for mailing the Journal.....	74.55
1898—Southern Engraving Co. Cuts for illustrations in Journal.....	4.46	1923—J. N. Reisman Rent for January and February, 1933.....	35.00
1899—Grover Middlebrooks, Atty Transportation and other expenses, to and from Gainesville attending court in suit of Mrs. A. L. Irvin vs. Dr. W. A. Palmour.....	16.71		
1900—Allen H. Bunce Salary as Secretary-Treasurer for November, 1932.....	150.00		
1901—H. L. Rowe Salary as Executive Secretary for November, 1932.....	175.00		

1924—Southern Press Clipping Bureau News clippings for January, 1933.....	10.00	1946—J. A. Redfearn Phone calls to promote the legislative program of the Association.....	4.90
1925—The Letter Shop Multigraphing letters to county sec- retaries to enclose with blanks for re- porting members and officers.....	2.00	1947—J. C. Patterson Telegrams to promote the legislative program of the Association.....	5.60
1926—Allen H. Bunce Salary as Secretary-Treasurer for Jan- uary, 1933.....	150.00	1948—J. E. Penland Phone calls to promote the legislative program of the Association.....	4.67
1927—H. L. Rowe Salary as Executive Secretary for Jan- uary, 1933.....	175.00	1949—E. K. Large, Postmaster Postage.....	3.40
1928—Alliance Printing Co. Printing and mailing 1700 copies of the January, 1933 issue of the Journal	272.63	1950—J. A. Redfearn Telegrams to promote the legislative program of the Association.....	30.00
1929—Miss Annie Jacks Balance of commission on advertising contract.....	12.37	1951—J. C. Wall Expenses as Councilor, wires and phone calls to promote the legisla- tive program of the Association.....	4.50
1930—E. K. Large, Postmaster Postage.....	30.00	1952—Marvin M. Head Phone calls and postage to promote the legislative program of the Associa- tion.....	27.43
1931—Wm. H. Myers Expenses as Councilor and for tle- grams to promote the legislative pro- gram of the Association.....	27.80	1953—J. C. Patterson Telegrams to promote the legislative program of the Association.....	20.56
1932—S. J. Lewis Expenses as Councilor and for tele- grams to promote the legislative pro- gram of the Association.....	26.41	1954—Wm. H. Myers Telegrams to promote the legislative program of the Association.....	3.46
1933—H. M. Fullilove Phone calls to promote the legislative program of the Association.....	2.55	1955—C. L. Ayers Expenses as Councilor and to promote the legislative program of the Asso- ciation.....	16.84
1934—Massachusetts Bonding & Insurance Co. Premium on surety bond No. F-99,- 019 for Allen H. Bunce, M.D., to April 1, 1934.....	7.50	1956—E. K. Large, Postmaster Postage.....	20.15
1935—Bryan, Middlebrooks & Carter, Attys. Expenses of Grover Middlebrooks, Atty., to and from Wadley to repre- sent Dr. Wm. A. Mulherin in suit of Mrs. Mary L. Herrington vs. Dr. Wm. A. Mulherin.....	23.30	1957—Alliance Printing Co. Printing and mailing 1725 copies of the March, 1933 issue of the Journal	30.00
1936—Service Engraving Co. Copper half tone cuts and zinc etch- ings for illustrations.....	49.52	1958—Alliance Printing Co. Printing 2,000 invitations to the Ma- con session.....	273.35
1937—Southern Bell Telephone & Telegraph Co. Telephone account to February 11, 1933.....	33.45	1959—Grover Middlebrooks, Atty. Expenses to and from Augusta to rep- resent defendant in trial of case of Mrs. Mary L. Herrington vs. Dr. Wm. A. Mulherin.....	9.00
1938—Southern Engraving Co. Repairing four electros used for ads in the Journal.....	2.60	1960—Lester's Inc. Pencils, paste, writing fluid, rubber bands, Gem clips, second sheets and pen points.....	17.90
1939—Alliance Printing Co. 2,000 copies of Radio Waves and 2,- 000 reprints in reference to dues and membership.....	15.75	1961—J. N. Reisman Rent for March and April, 1933.....	11.80
1940—The Letter Shop Multigraphing letters to delinquent members, letters to secretaries of coun- ty societies and for Committee on Scientific Work.....	6.90	1962—Southern Engraving Co. Mats for cuts used as ads in Journal....	35.00
1941—Allen H. Bunce Salary as Secretary-Treasurer for Feb- ruary, 1933.....	150.00	1963—Service Engraving Co. Six zinc etchings for illustrations.....	.80
1942—H. L. Rowe Salary as Executive Secretary for Feb- ruary, 1933.....	175.00	1964—Southern Bell Telephone & Telegraph Co. Telephone account to March 11, 1933.....	20.67
1943—Alliance Printing Co. Printing and mailing 1800 copies of the February, 1933 issue of the Jour- nal.....	273.87	1965—Southern Press Clipping Bureau News Clippings for February and March, 1933.....	6.00
1944—Miss Annie Jacks Commission on advertising.....	11.17	1966—Allen H. Bunce Salary as Secretary-Treasurer for March, 1933.....	10.00
1945—K. S. Hunt Phone calls to promote the legislative program of the Association.....	5.35	1967—H. L. Rowe Salary as Executive Secretary for March, 1933.....	150.00
		1968—The Letter Shop Multigraphing letters sent to former members and to secretaries of county societies for names of delegates.....	175.00
		1969—S. J. Lewis, M.D. Telegrams to promote the legislative program of the Association.....	5.25

1970—W. A. Selman, M.D. Telegrams to promote the legislative program of the Association.....	.84
1971—Western Union Telegraph Co. Telegrams to promote the legislative program of the Association.....	18.94
1972—Postal Telegraph & Cable Co. Telegrams to promote the legislative program of the Association.....	1.05
1973—E. K. Large, Postmaster Postage.....	30.00
1974—Atlanta Blue Print & Supply Co. 100 prints of floor plan for exhibits at Macon session.....	20.00
1975—E. K. Large, Postmaster Postage.....	30.00
1976—Biltmore Hotel Dinners for part of Councilors and Vice-Councilors after Council meet- ing, February 8, 1933.....	16.50
1977—Miss Anna Thurman Mimeographing, postage and station- ery used for Dr. J. L. Campbell, Chairman of Cancer Commission.....	3.59
1978—J. L. Campbell, M.D. Postage, typing and stationery for Cancer Commission.....	10.00
1979—J. E. Penland, M.D. Phone calls to promote the legislative program of the Association.....	1.47
1980—Miss Annie Jacks Commission on advertising to May 1.....	3.65
1981—E. K. Large, Postmaster Postage.....	30.00
1982—E. K. Large, Postmaster Postage for mailing Journal (De- posit).....	25.00
1983—Miss Ethelene Hale Special stenographic work for 1932 and to date in 1933.....	13.80
DEBITS FROM FULTON NATIONAL BANK	
May 2, 1932—Check, H. T. Edmondson, re- turned unpaid, paid later.....	7.00
Dec. 7, 1932—Checks, J. H. Campbell, re- turned unpaid, and paid later (2 checks, \$7.00 each).....	14.00
Dec. 23, 1932—Check, Piedmont Hospital, returned unpaid, receipt not signed, paid later.....	10.50
April 4, 1933—Check, C. J. Maloy, returned unpaid, paid later.....	3.00
April 27, 1933—Check, M. L. Malloy, re- turned unpaid.....	7.00
April 27, 1933—Check, W. N. Edenfield, re- turned unpaid, died suddenly.....	7.00
April 27, 1933—Check, Grady N. Coker, re- turned unpaid, notation by bank "not due"; this was an erroneous statement as the check was not post-dated.....	28.00
Exchange charged by Fulton National Bank, Atlanta, May 1, 1932 to April 30, 1933.....	6.70
U. S. Government tax—2c on each check. (Amount of tax on bank statements).....	2.60
Total.....	\$12,156.42

The Association has collected subscriptions for "A History of Medicine in Georgia" in the sum of \$1,190.00. Expenses which have been incurred and paid to date are \$1,398.81.

The Subcommittee will be grateful for any information and assistance which any one may render.

REPORT OF CHAIRMAN OF COUNCIL

In the interest of economy for the Association, the usual fall meeting of the Council was not held, consequently the only meeting of the Council since our last state meeting was on February 8th, at the Academy of Medicine in Atlanta. Every Councilor was present at this meeting, also seven Vice-Councilors. The other officers of the Association were also present.

At the time of this meeting, a bill, to re-establish the State Board of Health, was pending before the General Assembly of Georgia. The Council went on record as being heartily in favor of this bill and did a large amount of work over the state in its behalf. A committee from the Georgia Pharmaceutical Association came before the Council and asked their co-operation in aiding them to secure representation on the State Board of Health. Dr. T. F. Abercrombie, State Board Officer, explained some features of the bill that was at that time before the Legislature. Dr. Dan Y. Sage, Chairman of the Committee on Public Policy and Legislation, made a report of the work and progress of his committee.

Dr. Frank K. Boland, Chairman of the Committee on Medical History, reported that his committee was working, and was undertaking to make the history thorough and would be completed as early as possible.

Motion carried to endorse a Health Education Week during the first week of May in those counties where the physicians desired it and would sponsor the movement.

Very few matters of unethical conduct have been brought before the Council during the past year, but there has been some dissensions in some counties regarding "Contract practice".

The report of the membership of the various Councilor districts show to May 1st, about an average for last year, and the total membership of the Association by the end of this year will probably equal that of last year.

Each Councilor District has held one or two district meetings during the past year with good scientific programs.

Each Councilor has been active in his respective district for the interest of the profession and the Association as a whole, we feel, is in satisfactory condition.

C. L. AYERS, M.D.
Chairman

THE REPORT OF THE COMMITTEE ON SCIENTIFIC WORK

Your committee on Scientific Work met informally and formally several times during the past year, as a result of these meetings we submit the program for the Macon meeting which is before you.

Your committee has endeavored to arouse the interest of many practitioners in the smaller towns and communities of the state in our Scientific Assembly. We know from experience and from personal contact

with many of these men that they can make valuable contributions to the advancement of medicine and it was our endeavor during the past year to have more of these physicians present papers before this meeting. We feel that our efforts have been rewarded but not to the extent that we had hoped. The committee sent personal letters over the state to a large number of practitioners in the smaller communities requesting papers, the majority of these letters were unanswered, a few gladly responded to our request.

It has seemed to the committee that within the past five or six years there has been a tendency for a considerable number of members who attend the meetings of the Medical Association of Georgia to absent themselves from our Scientific Assembly. We have felt that the program should be of sufficient interest to warrant their attendance. Those who have papers spend a considerable amount of time and thought in their preparation and are entitled to be heard by a larger gathering than has occurred in times past. To this end we feel that extra medical activities, social entertainment etc., should be so arranged that they would not detract or interfere with the scientific program. Your committee felt that in abolishing the address of welcome and the response to the address of welcome at this meeting that valuable time would be saved. It is a foregone conclusion that our hosts welcome us to their city and our presence is ample evidence that we accept their hospitality.

In co-operation with the Department of Public Health of the State of Georgia and with representatives from the University of Georgia and Emory University post-graduate extension courses of medical instructions were given during the months of June and July of 1932, at Valdosta, Statesboro, Albany, Hawkinsville, Milledgeville, Griffin, Athens and Rome. These meetings were fairly well attended, much better in some localities than in others. Your committee feels that these courses can be made of a great deal of value and that they should be encouraged by the Medical Association of Georgia for the coming summer. In co-operation with the State Department of Public Health, Emory University will attempt to continue five weeks of post-graduate instruction during the present summer. We regret that because of circumstances over which they had no control, the University of Georgia, up to the time of the preparation of this report, did not feel that they would be able to participate this year.

WM. R. HOUSTON, M.D.

C. E. WAITS, M.D.

J. E. PAULLIN, M.D., *Chairman*

ALLEN H. BUNCE, M.D., *Sec'y-Treas.*

MARVIN M. HEAD, M.D., *President*

ABNER WELLBORN CALHOUN LECTURESHIP COMMITTEE

The Abner Wellborn Calhoun Lectureship Committee desires to announce that Dr. M. C. Sosman, Radiologist of the Peter Bent Brigham Hospital, Boston, is our guest this year. His discussion of "Through the

Alimentary Canal with the Fluoroscope" should prove highly interesting and instructive.

The report of the Treasurer of this fund Dr. F. K. Boland is attached.

JAMES E. PAULLIN, M.D., *Chairman*

H. I. REYNOLDS, M. D.

EUGENE E. MURPHEY, M.D.

CRAIG BARROW, M.D.

FRANK K. BOLAND, M.D.

TREASURER'S REPORT

ABNER W. CALHOUN LECTURESHIP FUND

Balance in bank April 16th, 1932.....	\$ 977.03
May 26, 1932, Dr. Dean Lewis.....	68.00
	<hr/>
	909.03
9 shares Ga. Power Co. stock at \$55.00..	495.00
	<hr/>
	414.03
July 1, 1932, Ga. Power Co. Dividend.....	13.50
	<hr/>
	427.53
Southwestern Railroad Dividend	32.50
July 1, 1932,	
	<hr/>
	460.03
July 1, 1932, Interest from bank.....	6.14
	<hr/>
	466.17
Oct. 1, 1932, Ga. Power Co. Dividend....	13.50
	<hr/>
	479.67
Jan. 1, 1933, Ga. Power Co. Dividend....	13.50
	<hr/>
	493.17
Jan. 1, 1933, Interest from bank.....	7.09
	<hr/>
	500.26
April 1, 1933, Ga. Power Co. Dividend....	13.50
	<hr/>
Balance in bank, April 15, 1933.....	513.76
Ten shares stock in Southwestern Railroad..	1,332.50
	<hr/>
	1,846.26
Nine shares Ga. Power Co. Stock.....	495.00
	<hr/>
	\$2,341.26

F. K. BOLAND, M.D., *Treasurer*

REPORT OF THE COMMITTEE ON PUBLIC POLICY AND LEGISLATION

Your committee desires the careful consideration of the following report:

1. That the program as outlined and adopted at the last annual meeting was presented to the recent Legislature in the form of prepared bills.

2. That a large amount of preliminary effort to

instruct the members of that body as to the value and importance of each measure proposed was put forth.

3. That we co-operated with and had the co-operation of our Woman's Auxiliary, the Georgia State Dental Association, the Georgia Pharmaceutical Association, and other groups of interested citizens, organized and unorganized, with the hope that good measures might be enacted by this last session of the Georgia Legislature.

4. That only one important measure sponsored by our Association, namely, the restoration and reorganization of the State Board of Health, was passed, and that late at night at the final session of the two houses. Very little if any serious objection was raised at any time by any legislator, nevertheless, the final votes apparently could not be called until the last tense moment of time.

5. That hundreds of measures were presented to the Legislature, some good and some not for any general good, which were not really considered by that body.

Your committee had a number of meetings and carried on considerable correspondence in the furtherance of these objectives. Naturally we were and are disappointed in the results obtained but we feel that the way for much progress was well paved and we hope it will not all be worn out or washed away before another opportunity arises. We feel that our Association has gained prestige and that the office holders and law makers are much more inclined to listen to the voice of progress as represented by this Association than has sometimes been the case. The mere fact that we make some effort to pass what we have proposed, even though we fail in much of it, places us in a far better legislative position. Later, when the great majority of our law makers have come to know that we always seek just and fair progress and by honest methods only, then will our proper place in local government be achieved. With that desired position in mind it behooves us to continue to enforce and propose only measures which fully meet such acid tests.

Unless the great bulk of our membership can and will support the program and make an effort to act as a political unit on important measures there is little hope for progress from this department. The time for argument among ourselves is before we go before our public with policies and legislation to be advanced. When local issues are later allowed to tear asunder small groups of members, the loss of our force and influence is many times greater than the handful usually involved. We cannot expect perfection in an organization of highly educated and individualized persons, such as ours, but we can and should expect them to see the absolute necessity of a united stand if dissolution as a body and ultimate professional destruction is to be avoided.

Therefore, we recommend:

That this Association go on record and publicly make known its objectives in so far as its legislative program is concerned. The measures that the Medical

Association of Georgia offered or supported were fair to all persons, were a benefit to the entire population and, in the opinion of most of the able laymen who have studied these measures, should readily pass any capable body of law makers.

GRADY N. COKER, M.D.

A. R. ROZAR, M.D.

T. F. ABERCROMBIE, M.D.

ALLEN H. BUNCE, M.D., *Sec'y-Treas.*

DAN Y. SAGE, M.D., *Chairman*

REPORT OF COMMITTEE ON MEDICAL DEFENSE

We submit herewith the report of the Committee on Medical Defense. Most of the work of medical defense has been performed by the attorneys for the Association, Bryan, Middlebrooks and Carter, and our report is confined to a statement of the eleven cases handled by these attorneys, during the past fiscal year.

FRANK K. BOLAND, M.D., *Chairman*

WM. A. MULHERIN, M.D.

J. O. ELROD, M.D.

C. L. AYERS, M.D., *Chairman of Council*

ALLEN H. BUNCE, M.D., *Sec'y-Treas.*

REPORT OF CANCER COMMISSION

Reviewing the annual reports we have submitted to this body, we find that during the past seventeen years the Cancer Commission has brought to Georgia some of the most distinguished students of cancer in this country. Prominent among them were: Drs. Gaylord of Buffalo, New York; Francis Carter Wood of Cornell University; Frederick L. Hoffman, one of the world's greatest statisticians, and some others equally eminent.

We have had the co-operation of the secular and religious press of the state. Many of the foremost editorial writers have lauded the work your Commission has done in trying to place before the profession and the public the most reliable facts about cancer.

Realizing that the women, especially the mothers of our state, are the most susceptible to cancer we sought the aid of the Woman's Auxiliary of the Medical Association of Georgia. Dr. Head appointed a member of that body to serve on the Cancer Commission. Through the good offices of Dr. Joseph P. Bowdoin, Vice-President for Health of the Parent-Teacher Association, contact was made with that organization. They readily agreed to adopt the "Health Program" of the Woman's Auxiliary as part of their "Health Week" program and featured the study of cancer and parental and infant mortality under the title of "Mother Welfare". For this course the Cancer Commission recommended a two-year study of cancer of the uterus and breast, urging the necessity of frequent physical examination and consultation with the family physician. Your chairman issued a four-page leaflet entitled, "Mother Welfare". Mrs. Peterson of Tifton, Georgia, Health Chairman of the Auxiliary, distributed it among the P-T A units throughout the state,

where it was read or commented on at some of their meetings. If we could secure the money to issue 50,000 of these leaflets for distribution to each member of the P-T A we believe many cancers of the uterus and breast could be prevented or diagnosed in the early curable stage.

Your chairman addressed a meeting of the State Congress of the Parent-Teacher Association at Athens early last summer. The message was well received. After this meeting, Mrs. J. Bonar White, the Auxiliary's representative on the Cancer Commission, was invited by Mrs. Hankinson, State President of the P-T A, to join their "Flying Squadron" and has had the privilege of visiting and addressing select groups in every section of the state, using as the title of her address, "Mother Welfare". In addition to this work Mrs. White has made thirty-eight talks to groups of women at numerous places in Atlanta and other cities. Mrs. Revell, President of the Auxiliary, has made numerous addresses to women's clubs and other organizations. She has sent your chairman copies of these addresses for our files. We wish to extend to the Auxiliary our thanks for the splendid work they have done during their first year of activity.

Some of the district chairmen of the Cancer Commission have been quite active. It is always a pleasure to give Dr. G. Y. Moore of the third district first honor as every county in that district has been covered. In the tenth district Dr. Bernard has done good work. He has a weekly conference in connection with the University Hospital, where cases are seen and discussed. Many of the others report activity, and Dr. Parks of the fourth district believes that especially good work could be done if the Association could furnish a few educational lantern slides so that lectures and demonstrations could be made more instructive. We regret very much the illness of Dr. C. C. Harold, chairman for the sixth district, and hope that he may speedily recover his health.

The editor of the Journal of the Association has rendered the Cancer Commission a page in each issue. We hope that members of the Commission will contribute liberally to this new feature of the work.

Only recently your chairman has addressed a circular letter to presidents of the district and county societies requesting them to arrange a special meeting to discuss every feature of the subject and, where possible, to arrange a clinic at which diagnostic and cured cases can be exhibited.

The American Society for the Control of Cancer recently sent us an outline of a program which they are carrying out in several states. We have been active for the past several years in nearly every line suggested, except in raising money. We find this impossible just now although there is in prospect a gift to our Commission in the form of a legacy, but I cannot tell what the amount will be. The national society also sent us a series of articles for the lay press of the state. I have requested Dr. Abercrombie to help us in distributing these, but up to this time he has not been able to find the money.

Mr. Tombs, Director of the Bureau of Vital Statistics, has recently sent me a complete outline of the cancer statistics for the past twelve years. There has been a gradual increase in the number of deaths and the rate per 100,000 up to last year, when there was a slight decrease amounting to fifty less deaths: 43 in white and 7 in negroes. Cancer deaths among white people always exceed those among negroes by thirty-five to forty per cent.

Your chairman had contemplated requesting the House of Delegates to make some change in the Cancer Commission, but for various reasons I think this should be deferred for at least one or two years.

J. L. CAMPBELL, M.D.

Chairman

REPORT OF SUBCOMMITTEE ON MEDICAL HISTORY OF GEORGIA

The subcommittee on Medical History of Georgia begs leave to submit the following report for the fiscal year 1932-33:

The members of the committee have given considerable thought and time to this work during the past twelve months. Obviously, the committee itself can prepare but a small portion of the history. A large part of the original work must be done by the members of the Medical Association of Georgia. The committee is reviewing and rewriting chapters of the history originally prepared by the former editor.

During the year we have written letters to the secretary of every county society, asking for historical notes and biographical data which should be included in the work. The whole membership of the association has been appealed to through the columns of the Journal, and will be begged again for help.

By this means we have received considerable valuable material, but by no means as much as we should have. If work of this kind must be done by men who are at the same time engaged in the practice of medicine to make a living, it is evident that considerable time will be required to finish the work. Our great fear is that when the work is finally published criticism will come from various places that the book should have said something about this or that event, or this or that Georgia doctor. This is the reason why we have written the various secretaries and again appeal to every member of the Association to send in anything that he thinks should be included in the history, and do it immediately.

The state seems to have awakened to the value of keeping its historical records, so that histories of various counties are appearing from time to time. This fact has caused us to write to the ordinary of every county in Georgia, asking that if anything of historical interest in the medicine of the county has been brought out, that he be sure to see that our committee has it in order to include it in our work.

The committee realizes that many members of the Association have already paid their subscriptions for this book. This stimulates us to finish the work as soon as possible. The committee must state that it

cannot include in the book every piece of history which is sent in, nor can it promise to include the biographical sketch of every doctor which is sent in. Naturally we would like to give a biographical sketch of every doctor who has been a member of the Medical Association of Georgia, but this would require a book larger than we could afford to print. Therefore, the selection of those who are entitled to be named in the book must be left to the subcommittee, or better, to the whole committee on the Medical History of Georgia.

We again request your active cooperation in this important work.

FRANK K. BOLAND, M.D., *Chairman*

W. R. DANCY, M.D.

A. G. FORT, M.D.

A. H. BUNCE, M.D., *Sec'y-Treas.*

REPORT OF ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

The Advisory Committee to the Woman's Auxiliary met in Atlanta on June 23, 1932, and the following members were present:

Doctor Marvin M. Head, Ex-Officio

Doctor S. T. R. Revell

Doctor Marion T. Benson

Doctor Arthur G. Fort

Doctor B. H. Minchew

It was a joint session of the Advisory Committee with the following officers of the Woman's Auxiliary present:

Mrs. S. T. R. Revell, President

Mrs. Bonar White, President-Elect

Mrs. N. Peterson, First Vice-President

The meeting was held in the State Health Department at the Capitol, and Doctor T. F. Abercrombie and Doctor J. P. Bowdoin attended the session, entered into the discussions and assisted greatly in the deliberations.

The Advisory Committee endorsed the program offered by the Auxiliary for their work during the current year, and assisted in preparation of certain written articles for general distribution on health matters. The State Health Commissioner and his staff offered all the assistance possible in this regard.

We have assisted in meetings of the Parent-Teacher's Association in different parts of the state as individual members, and given talks on health matters when called upon to do so. We have assisted in the entertainment and the preparation of programs at county and district meetings.

The work of the Woman's Auxiliary is an inspiration to us and at this peculiar economic and social period in our history, we feel that the Auxiliary will find new problems, both for our profession, as well as for laymen in the matter of conservation of health, and will assist greatly in the solution of them.

NOTE: Please notify the Secretary-Treasurer immediately of any errors or omissions.

The Proceedings of the House of Delegates will be continued in the next issue of the JOURNAL.

FURTHER OBSERVATIONS ON PATHOGENIC YEASTS*

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The attention of the medical profession is constantly being called to the importance of yeasts as a cause of disease. There are physicians, however, who are yet unwilling to believe these organisms are primary infectious agents. In a report of my experiences with a yeast (*Saccharomycete Pleomorphus Virulens*¹), made in 1930, I concluded that there was sufficient evidence to prove that particular strain of yeast a principal cause of lung disablement.

In this paper a report is made of my experiments with yeasts of like characteristics, commonly found in sputum, which I recovered from the sputum of both tuberculous and non-tuberculous patients. The incidence of the organisms, the physical characteristics of the sputum, the symptomatology of the patients, the bacteriology, pathology and immune reactions are cited and certain diagnostic principles are suggested.

Incidence: There were 210 sputums examined by cultural methods and stained smears. Eight and one-half per cent had yeasts repeatedly present, and of this number forty-three per cent had tubercle bacilli and yeasts in the sputum. Fifty-seven per cent had only yeasts, and tubercle bacilli were absent. These figures were not as high as other investigators² have reported.

Physical Characteristics of the Sputum: It was observed that the sputum from those patients in which no tubercle bacilli were found, appeared greyish white in color, with a moderate granularity, an occasional bit of blood, and a marked tenacity. The sputums with tubercle bacilli present, besides the above features, were often more purulent and frequently had a greenish coagulum.

Symptomatology: Several patients were considered. Cough, fever, loss of weight and weakness were the outstanding complaints. Those with a more marked lung involvement had decreased chest expansions, numerous rales—mucous, moist and fine—with dullness on percussion at the lung bases. More commonly, only one base was involved. All Wassermann tests were negative. The blood counts revealed a leukopenic trend, with a lymphocytic increase. Two had a history of disease lasting more than six years. Of these patients, two were tubercular and one was purely a broncho-moniliasis.

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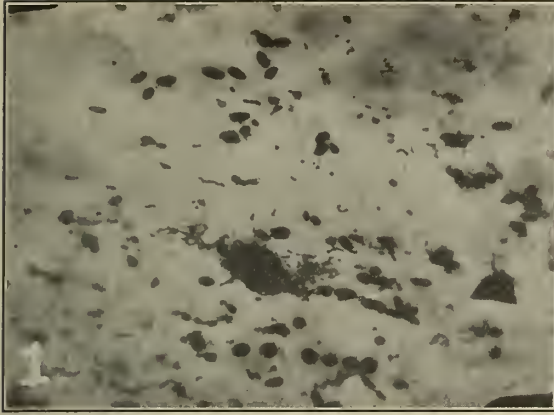


Fig. 1. Yeasts in patient's sputum.

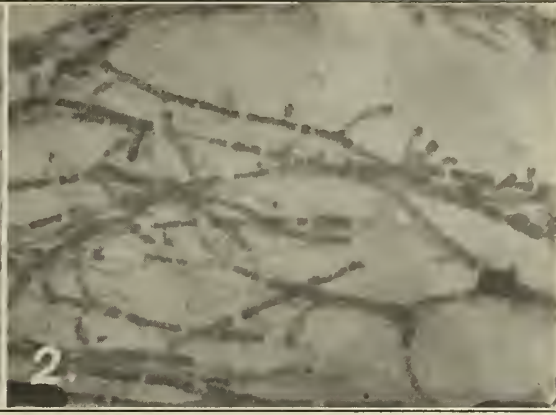


Fig. 2. Branching forms present in patient's sputum.

A typical case history is as follows: J. F., female, age 33, complains of cough and chest pain with a slight shortness of breath. In March of 1929 developed a severe cold followed by a chronic productive cough with very little fever. The physical examination revealed rales in the base of the right lung with slight increase in bronchial breath sounds. The blood count revealed 4,000 white cells with 50 per cent of the cells lymphocytes. The sputum was greyish white in color, of moderate tenacity and had occasional bits of blood. There were numerous yeasts present. No tubercle bacilli were found. Physically there was little weight lost, but the cough persisted and was increasing in intensity and in the quantity of sputum.

Bacteriology: From the sputum yeasts were repeatedly recovered by culture. Sabouroud's medium was used for this purpose. Often the colonies exceeded a total number of five. Smears from each specimen likewise revealed yeasts. Upon Sabouroud's medium, the colonies usually appeared after forty-eight hours incubation. They had a white glistening pearly color and were rounded and elevated. The colonies spread slightly as they became older. Their edges often were irregular. Centrally they tended to build upward, and had an irregular ragged dome. A thick culture on a slant showed a piling up of the organisms, particularly at the edges. Microscopic study of the colony periphery revealed numerous radial-like mycelia, to which many buds were attached. An acid medium encouraged mycelia formation. Alkaline medium retarded the formation of stalks. In the latter medium the method of growth was usually by budding. All strains cultured, except in two instances, were dextro-maltose fermenters. Acid was usually formed in lactose and sacchrose. These sugar changes indicated that the strains were those of *monilia albicans* and *endomyces albicans*. Their relationship was further indicated by agglutination reactions. In size, the yeasts were from four to ten microns. Morphologically, the yeast cells were ovoid though often others were rounded. They were refractile and had a faint green tinge color. There was a very immature ectoplasm, except in old cultures. There was often an inner cell-like body. The number of nuclei varied with the cell's age. As many as four

were noted when observed in hanging drop specimens. The mycelia forms were long and thick and had end-to-end points and from these segments lateral branches were attached; to these the bud forms adhered in cluster formation. The organisms would grow with or without oxygen. Gram's stain was retained. Death occurred when heated at 80 degrees for thirty-five minutes. Sunlight killed the organisms in two hours. Saturated potassium iodide destroyed them, and when diluted one-half its saturated strength, inhibited the yeasts' growth. Gentian violet, one per cent solution, killed the organisms in a dilution of 1—12,800.

Pathology: Animals were used to determine the malignancy of the organism. A suspension of the yeasts containing approximately 15,000,000 cells per cc. were used for inoculation. The suspension was counted with a hemacytometer, using the white diluting chamber. The organisms were administered intravenously, intrapleurally and intranasally. *Rabbit No. 273* was inoculated on October 12th. Its blood count before receiving the organisms revealed 9,000 white blood cells per cu. mm. On the 13th the count was 10,800; on the 14th 11,200; and on the 15th 19,000, with 43 per cent lymphocytes. At this time he showed a slight evidence of toxemia. On the 17th of October leukocytes totaled 16,000; on the 20th 12,400 and on the 29th 10,800. On this latter date he did not seem to be very sick, however, he was inactive and had lost weight. An autopsy on October 30th revealed an increase in the peritoneal fluid and yeasts were present. There was a moderate cloudy swelling of the liver, spleen and kidneys. The rabbit's blood culture was negative, and its blood serum agglutinated the yeasts in a dilution of 1—80. Presumably, this animal passed from an acute infection into one of a chronic state. *Rabbit No. 339* received an intravenous inoculum composed of an admixture of the strains of organisms received from the patients presented in this paper. Three days after the injection the blood count revealed 19,000 white cells; six days after injection 12,000 and on the 7th day he was seriously ill. An autopsy showed a generalized infection in which the lung, peritoneum, liver and kidneys were studded with white, elevated, tuberculous-like

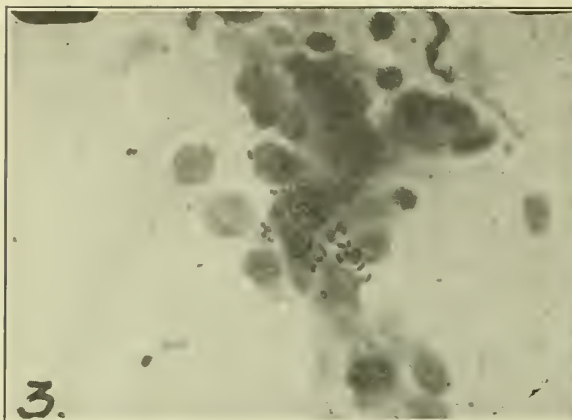


Fig. 3. Yeasts in small spore formation collected around cells from bronchi, confirming Reubold's observation made in 1854.

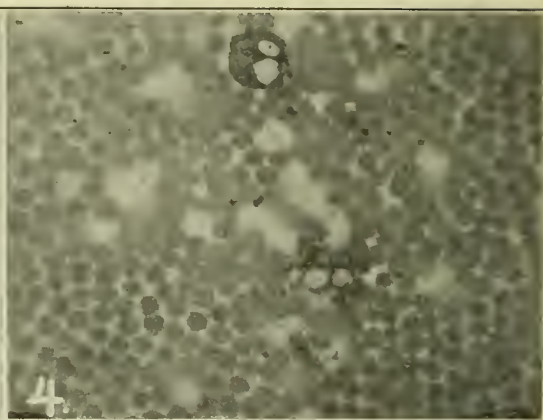


Fig. 4. Stained polynuclears showing cells with engulfed yeasts.

bodies, which were variable in dimensions and averaged about the size of a small pin head. There was an increase in the peritoneal fluid. The bladder was tremendously distended and filled with urine. Rabbit No. 338, into whose lung yeasts were injected, was stolen from his pen. Therefore, gross studies were impossible. X-ray pictures ten days after injection showed a cloudy reaction within the infected lung. Rabbit No. 336 received intranasal instillations on October 12th. Three days later he had a nasal discharge. On October 28th, a necropsy showed a congestion of both lungs. There was a slight exudate, white in color, within the bronchi. Smears from this culture contained an occasional pus cell and numerous bronchial cells. Within and about these cells colonies of the yeasts were found. This observation confirmed Reubold's³ report made in 1854, in which he found yeasts present beneath the bronchial epithelium. White mice receiving the yeasts into the peritoneal cavity developed a peritonitis, with small abscesses. Smears showed yeasts actively growing and the peritoneal exudate was composed of polymorphonuclears, lymphocytes and phagocytes.

The histological picture showed cloudy swelling of the cells in general, particularly those of the liver, spleen and kidney. In the lesions that suggested chronicity there was an infiltration of lymphocytes and polynuclears, with the lymphocytes predominating. The small abscesses were composed of polynuclears, eosinophiles, phagocytes and fibroblasts. Yeasts in mycelia forms were usually present in the stained sections. Often there was a dense collection of round cells about small blood vessels. In some of the miliary areas there was found a central liquifaction and an occasional giant cell was seen. Not infrequently plasma cells were present.

Sections from Rabbit No. 336 made from the bronchi showed a peri-bronchial infiltration of polynuclears and lymphocytes, with degenerated changes extending through the bronchial wall into the deeper structures. Here the yeasts were stained in their spore forms. This was a most interesting finding and indi-

cated very strongly that these organisms were capable of impairing the bronchial membranes and may give rise to chronic bronchial disease.

Immune Reactions

Various investigators have made reports concerning the immunity phases. Agglutination was noted a number of years ago and has always been considered important. Steinfeld, however, thought it of little importance and that the compliment fixation test was ambiguous. According to Warr⁵, Kurotchkin and Chu were enabled to obtain positive precipitin tests in the blood of some of their patients.

A large number of experiments were performed in an effort to devise a diagnostic compliment fixation test. Antigens were prepared from the yeasts in three ways. First, heavy yeast suspensions in saline were used after the emulsion had remained in a refrigerator for ten days. The compliment could not be fixed satisfactorily in this manner. Further antigenic solutions were prepared with alcohol. One cc. of the yeasts within a graduated centrifuge tube was overlaid with 5 cc. of 95 per cent alcohol.

The tube was shaken daily for fifteen days. Equal quantities of this alcoholic extract were diluted one-half with normal saline—a faint opaque solution resulted. This extractive was titrated for its antigenic qualities. Fifteen hundredths cubic centimeters of the extract added to .15 cc. of the patient's serum gave a positive fixation of the compliment. This reaction was best obtained in serum that had an agglutinin strength above 1-50. The test was very sensitive and frequently anti-complimentary reactions occurred in the controls. Other alcoholic extractives were made from similar quantities of yeasts, which were first treated consecutively with ether. This latter mixture was perhaps a bit more sensitive.

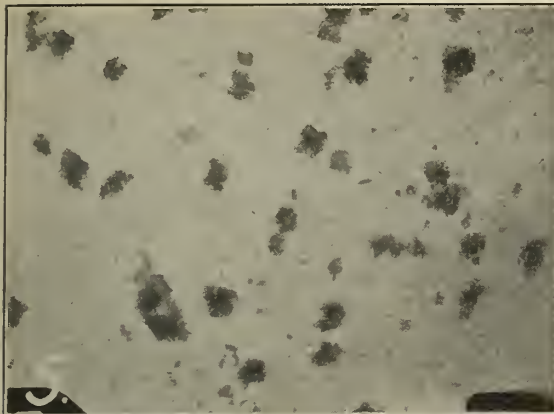


Fig. 5. Yeasts agglutinated by patient's serum.

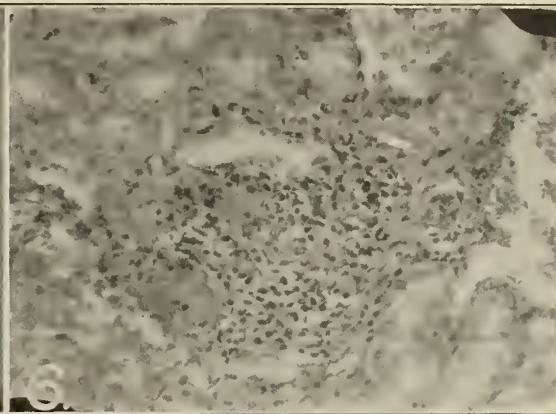


Fig. 6. Miliary area composed of lymphocytes, endotheliocytes, plasma cells and polynuclears in an infected rabbit kidney.

My conclusions, however, concerning the fixation of the compliment were as follows: The results made me feel that I could devise a satisfactory antigen that would be of diagnostic aid. The compliment could be fixed, with an antigenic substance derived from the yeasts, using alcohol for extraction.

Experiments concerning the precipitins were made. Simple alcoholic extractives were unsuitable, however, one cc. of yeast extracted fifteen days with 5 cc. of 95 per cent alcohol and then adding cholesterol produced an antigen which appeared similar to other cholestronized antigens when normal saline was added. Dilution ten times with saline dissolved a confusing precipitate. Using a patient's serum with a strong agglutination, for titrating purposes, it was observed that a definite and well discernable precipitation occurred. The antigenic unit used in the test was .1 cc. of the mixture, to which was added .2 cc. of the inactivated patient's serum. The tubes were then shaken for ten minutes, incubated for thirty minutes and then .4 cc. of normal saline added. In this test a four plus reaction equaled about a three plus Kahn test. So far the precipitin tests are practical and give dependable results.

Agglutination tests were very important. Sera gathered at random from hospital patients contained agglutinins that would clump the yeasts. Of a series of twenty patients, eight gave agglutination reactions with the serum in dilutions as high as 1-20. Eight other sera had an agglutinin strength above 1-50 dilution; four agglutinated beyond 1-80 and even as high as 1-160. Of these patients, fifty per cent had yeasts in the sputum, both by smear and by repeated culture. It was this fact that encouraged my work with the compliment fixation and precipitation tests. I found that the higher the

agglutinin strength the more significant was the precipitation and the more satisfactory the fixation of the compliment. It should be borne in mind, however, that in a 1-10 or 1-20 dilution of sera from non-infected individuals an agglutination reaction was obtained. It was only when the agglutinin strength exceeded 1-20 in dilution, that the phenomenon could be considered as a suggestive diagnostic aid.

Opsonins were present in the blood of the infected patients. Those sera, which had strong agglutinins, precipitins and positive compliment fixations were used for the experiments. Polymorphonuclears were obtained from healthy people and an equal suspension of these white cells was treated with the patients' sera. After one-half hour in the water bath, smears revealed a progressive and characteristic ingestion of the yeasts by the phagocytes. Ninety per cent of the white cells engulfed the yeasts. Many of the white cells became greatly distended with the organisms. In some instances several cells collectively attracted clusters of the yeasts. It was observed that within the engulfed yeasts certain autolytic changes occurred in their structure and their normal staining qualities disappeared. Controlled phagocytes likewise attacked the yeasts. Serum from patients whose sputum contained yeasts, and whose blood agglutinin strength was above 1-50, stimulated a very remarkable phagocytic activity much more apparent than in those of the controls.

Skin reactions were observed on several patients. An emulsion containing approximately twenty million yeasts were allowed to extract in saline for two weeks and then treated by heating. One minim of this material was injected subcutaneously and readings made ten minutes later. Patients with

a strong serum agglutinin gave a very faint skin test, characterized by a pinkish redness without elevation, which measured about 6x5 mm. in diameter. In patients with blood agglutinin strength about 1-20, the cutaneous reactions were more significant. Here the area of redness was very marked and the measurements averaged 20x15 mm. in size. In two hours the erythema faded away. No systemic reaction occurred.

In the patients presented in this article, each one had a positive smear for yeasts, and each had three or more positive cultures. Agglutinin, precipitin and compliment fixation tests were positive and cutaneous skin reactions were present. The blood serum stimulated phagocytic ingestibility. Their blood serum agglutinated the yeasts cultured from their own sputum in a dilution exceeding 1-50. These factors seemed sufficient for one to believe that they are suffering from the effects of yeasts. If these facts are accepted as sufficiently incriminating it seems that the following tests should be utilized as aids in diagnosing these lesions.

1. Repeated cultures, in which yeasts are recovered from the sputum.
2. Positive yeast smears.
3. Symptomatic evidence, such as cough; indefinite temperature; loss of weight.
4. The characteristic sputum.
5. Positive agglutinin tests. (1—30 upwards dilution).
6. Positive precipitin tests.
7. Possible positive compliment fixation test.
8. Increased phagocytic activity, when white cells are treated with patient's serum.
9. Leukopenic blood count, with lymphocytic increase.
10. X-ray and physical chest findings.

Conclusions

I believe that sufficient evidence has been established to prove the existence of pathogenic yeasts, and that they are capable of producing disease in the human. They may cause a primary lung involvement. Most often, I believe, they are secondary to other infectious agents. Frequently, they are present in patients suffering from tuberculosis and may, in this association, delay recovery from that disease. The ordinary yeasts, as herewith described in this paper, will produce serious disease in animals, both acute and chronic, though I am inclined to think that the lesions produced are more often of the chronic type.

Further incriminating tests obtained through the immune reactions have been list-

ed and described and are suggested as diagnostic aids.

My next experiments will deal further with the diagnostic applicability of the various tests outlined; the incidence of the yeasts in sputum; the classification of these organisms and the treatment of the patient. If eight and one-half per cent of the patients in a given sanatorium can be aided to a quicker restoration of health, and by methods suggested, cases can be found who are non-tuberculous and who are victims of a curable yeast infection, and these people restored to normal, then the work will be important.

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DIFFERENTIAL DIAGNOSIS OF DISEASES OF THE RIGHT COLON*†

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The diagnosis of conditions giving symptoms referable to the right abdomen involves many considerations and is exposed to many errors. The usual and predominant symptom is pain or discomfort. Mal-function of some right abdominal organ may precede the onset of pain and thereby give suggestion, through the clinical history, of the site of origin of the trouble. Systemic symptoms, especially fever and its accompaniments, may testify to the far advance of the underlying pathology. The diagnosis will involve considerations, with the indicated examinations, of the liver, the gall bladder, the duodenum, the right kidney and its ureter, the right fallopian tube and ovary, and of the right colon, which is the restricted subject of this paper, due to the limitations of time. The emergencies of acute disease seldom proceed from the right colon, in which term is included the cecum, ascending colon, and the hepatic flexure. Acute disease of the right abdomen involves the consideration of acute cholecystitis, perforation of duodenal ulcer, acute appendicitis, acute pyelitis, Dietl's crisis, renal calculus, ruptured right tubal preg-

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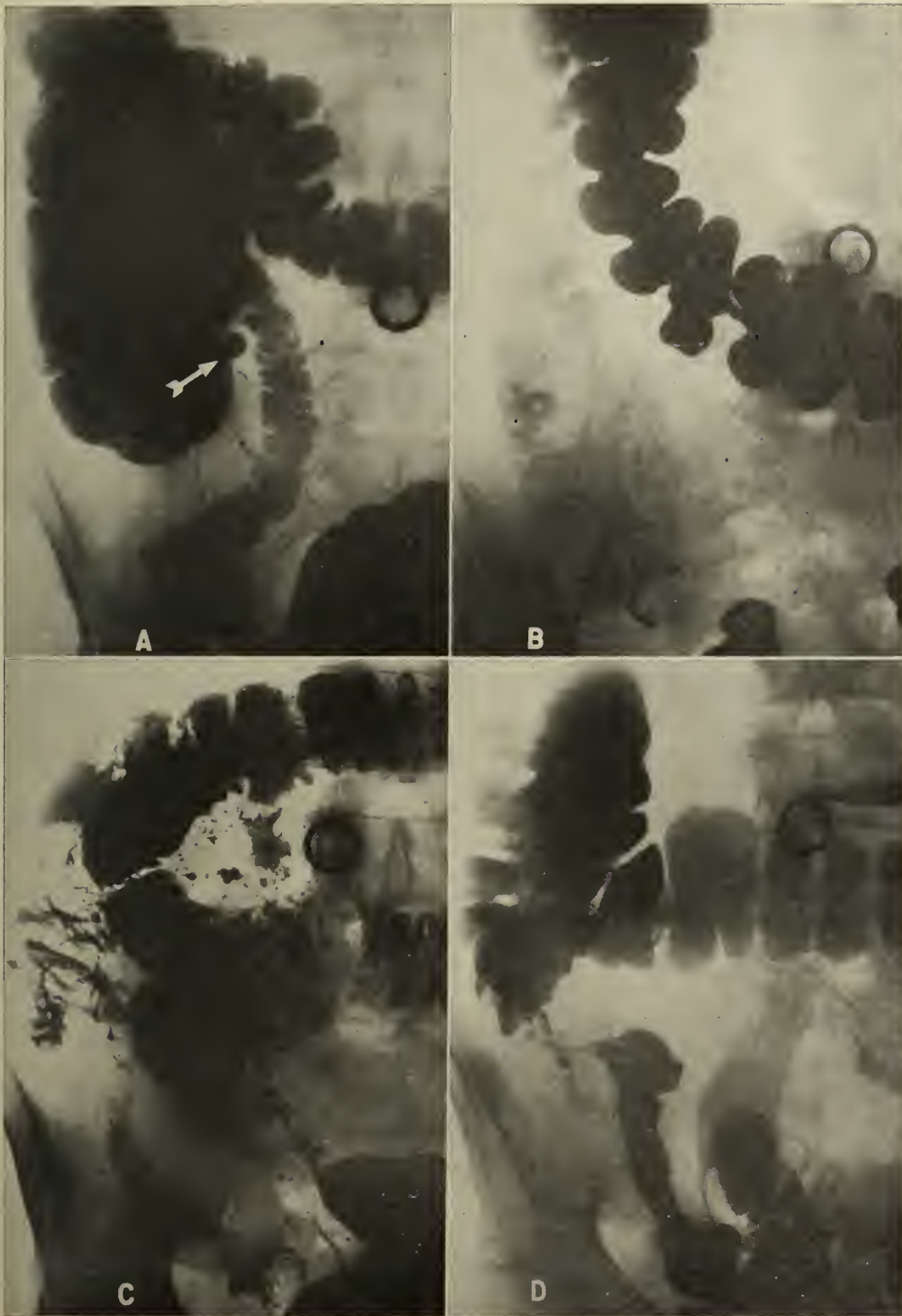


FIGURE 1. CONDITIONS IN THE RIGHT COLON.

- A. Diverticulum of the cecum associated with a pathologic appendix, which was quiescent.
- B. Simple typhlitis creating an hypermotility of the right colon and having associated a pathologic appendix which was quiescent.
- C. Non-specific ulcerative typhlitis, with much irritability of the right colon, creating a marked hypermotility resulting in diarrhoea. Pellagra was associated. Autopsy confirmation.
- D. Ulcerative tuberculous typhlitis. Operative confirmation.

nancy, acute right pyosalpinx, and the twisted pedicle of a tumor of the female pelvic organs. Acute disease is more often declarative of its nature and origin than is chronic or sub-acute disease. In less urgent conditions of the right abdomen, it is usual and correct to consider first the gallbladder and the appendix, as these certainly account for a large proportion of all right-sided diseases. The question of the gallbladder has found almost complete resolution in the use of cholecystography. The appendix, however, may neither be dismissed nor incriminated with such certainty. It must be considered along with the intrinsic problems of the right colon of which its condition is often a part. While it is possible for me to restrict my discussion chiefly to the right colon, it is not possible for a clinician to so arbitrarily limit his investigations. By what means, then, will his diagnosis be directed to the right colon and to the recognition of its specific disease? The clinical history is of primary usefulness. Either it will reveal the disturbances of function, which incriminate one or another organ, or it will elicit a train of symptoms which are recognizable as of a definite disease. The abdominal examination will reveal anatomical alterations, chiefly, palpable tenderness and often a mass which when present are localizing in their inferences. The absence of abnormal physical findings will force reliance upon other methods. The laboratory examination of the blood, the urine and the stool may give direction to other investigations. The especial methods of examination, gastro-intestinal roentgen ray, cystoscopy and ureteral catheterization with roentgen ray, proctosigmoidoscopy, and cholecystography are used too often because of the personal interests of the clinician, before securing an exhaustive history, adequate physical examination and routine laboratory investigations. Special methods should be employed only after the fundamental procedures have been fully used, and have indicated the diagnostic problem to which they are applicable. The gastro-intestinal roentgen ray examination should be used to review completely the gastro-intestinal tract, rather than to observe a restricted segment for confirmation or rejection of some tentative diagnosis. Diseases of the right colon cannot be investigated per se, but their diagnosis will be the logical outcome of the summary of findings after complete examinations of the patient and of his gastro-intestinal tract have been made.

Chronic appendicitis is a very real and important condition. After a period of hasty and superficial diagnosis, which entailed a

reproachful percentage of surgical failures, we have just finished a period in which almost complete denial of the condition was current. Now the challenge to its diagnosis is accepted. Adequate examination will reveal chronic appendicitis, both separately and associated with other abdominal diseases. My own views upon the position of chronic appendicitis and its diagnosis in diseases of the gastro-intestinal tract have been published and I shall not now discuss the matter extensively. Certainly the gastro-intestinal roentgen ray examination may develop objective evidences of appendiceal pathology which will be of primary importance in determining its disease state and its relation to the clinical problems of the abdomen. The ectopic position of the appendix, leading to confusion of its symptoms with those of other organs, and embarrassing its surgical care, is of especial interest. It is only by means of the gastro-intestinal roentgen ray examination that the appendix and the right colon can be visualized.

The anatomy of the right colon may vary in a manner which will greatly influence segmental and total colonic functions. Aside from the true anomalies of rotation of the colon, I have never observed that the processes of embryological development have failed to create the hepatic flexure. Beyond the hepatic flexure, however, the migration of the colon may have been arrested at any level, between the high sub-hepatic position and the lowest position in the true pelvis. The cecum may even invade the left pelvis. This hyper-rotation, which carries the cecum into the pelvis must be distinguished from the simple pelvic position of the cecum as it occurs in the congenital visceroptosis of the asthenic bodily habitus, in which case there is no increase in the usual length of the right colon. Tonus of the bowel is of greater importance in mal-function than is its topographical position. The long right colon of hyper-rotation gives an anatomical basis for right colonic functional stasis and constipation. Any depression of its muscular tone is the cause of a slowing of the segmental motility proportional to its unusual length. Absorption and inspissation are exaggerated. Obstinate stasis may result. Fecal accumulation may cause persistent discomfort by general pressure or by pressure upon the pelvic organs. The pelvic cecal mass may be palpated in women by bimanual vaginal examination.

Localized dilatation of the cecum, or megacecum, is not infrequently seen. It is more often congenital than acquired. A functional

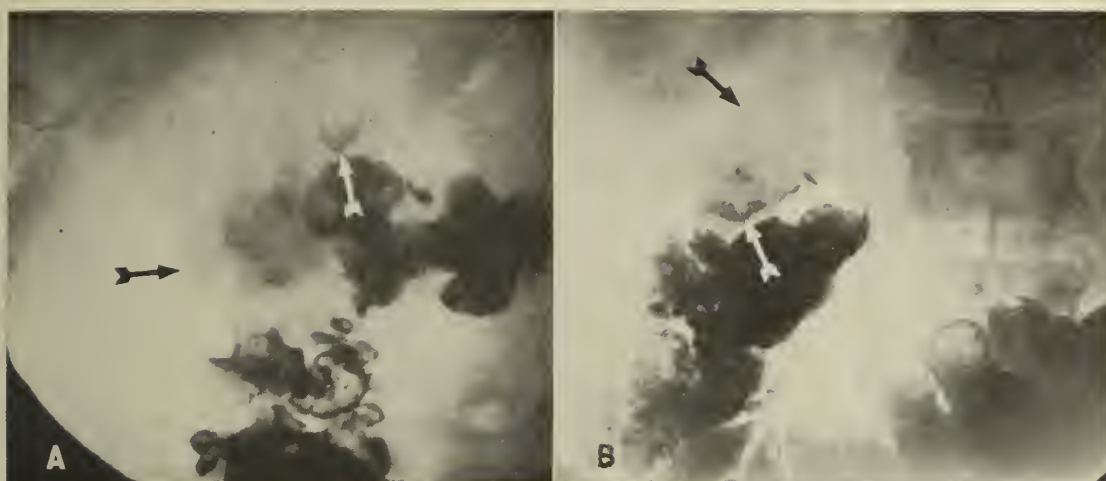


FIGURE 2. CONDITIONS SIMULATING GALLBLADDER DISEASE.

A. Diverticulitis in diverticula of the hepatic flexura. The gallbladder shows good function by cholecystogram.
 B. Infra hepatic, sub-acute appendicitis simulating subacute gallbladder disease. Cholecystogram demonstrated active gallbladder function. Operative confirmation.

compensation occurs in the greater dilatations which corrects the tendency to stasis. The absorbing faculty of the mucosa increases stasis by inspissation of the contents in the lesser dilatations, but this faculty of absorption is lost in the greater dilatation, and the contents remain fluid and are washed into the distal bowel by the oncoming intestinal contents. There is excellent motility in these greater dilatations according to the criteria of the opaque roentgen ray meal. A small experience with cecopexy and plication has not encouraged attempts at surgical correction.

Diverticulosis of the right colon may occur independently; but it is usually part of a general colonic diverticulosis, which has its greatest expression in the sigmoid. Diverticulitis may, however, develop independently in those diverticula located in the right colonic segments. Inflammation of a cecal diverticulum will so stimulate sub-acute appendicitis that only the roentgenological demonstration of the diverticulum and of a quiescent appendix will determine the diagnosis, and this is not so simple as it sounds.

Inflammation of diverticula in the hepatic flexure gives an almost perfect simulation of sub-acute gallbladder disease. Again only the roentgenological demonstration of diverticula in this area and also of a functioning gallbladder by cholecystography will satisfy the diagnosis. With a non-functioning gallbladder the source of symptoms would be confused beyond complete clinical resolution. The importance of a complete and correct diagnosis for avoiding an operative interference is obvious, since the medical management of any diverticulitis is alone permissi-

ble, prior to the development of peri-diverticulitis and obstruction of the bowel.

The cecum may have preternatural mobility when the right ceco-colon has great length by reason of its hyper-rotation. The excessive growth of the colon pushing the cecum into the right pelvis will have favored the persistence of the right mesocolon. The condition is in no sense essentially pathological, and only seldom gives rise to clinical manifestations when displacement of the mobile cecum occurs in a manner to disturb its function and that of the ileum. Displacement and torsion very rarely reaches a degree to cause complete intestinal obstruction. Clinical differentiation of the symptoms due to this condition from those of other sub-acute regional disease is difficult. It is essential to show that symptoms arise with the malposition of the movable secum and are relieved by the recovery of usual topography. Roentgenological studies during an attack should demonstrate the displaced cecum and the gaseous distention of the affected segments; and similar studies at other times, when there are no symptoms, should show usual topographical arrangements.

Chronic intussusception of the ileocecal valve occasionally exists and may produce a painful palpable mass, suggestive of inflammatory hyper-plastic disease. The roentgen ray may reveal the condition, or it may require surgical elucidation. An interesting and rare condition, which will be shown with the slides, illustrates the evagination of the right colon after the cecum has exteriorized itself in the right groin, apparently by attenuating and breaking the anterior wall of the inguinal canal, after which the cecum opened, leaving

the ileocecal valve exposed. The bowel then evaginated until a long process hung down along the right thigh.

Hyperplastic disease in the cecum is, at all adult ages, usually cancer. Primary tuberculosis is so infrequent in the United States that it must be considered with care. Actinomycosis is also very rare. Other causes for hyperplastic granulomata have been encountered. In one instance a fish-bone had punctured the terminal ileum. A fortunate adherence of the cecum and to the anterior abdominal peritoneum had localized the abscess. The bone lay in the wound when the intestine was freed from the abdominal wall. Occurring in an elderly man the preoperative diagnosis had been cancer. It was of interest, that after convalescence from the operation, there was demonstrated in this patient, the gastric achlorhydria, which the escape of this bone from the decalcifying action of hydrochloric acid had suggested.

In another instance a young, colored woman presented herself for the repair of a marked prolapsing ventral hernia which had followed two operations, first appendectomy and second, right salpingectomy, both without relief of the original symptoms. A straight pin was demonstrated roentgenologically to lie in a calcified, old abscess cavity at the ileocecal juncture. A mass palpable near the cecum in a young white woman, a nurse, who had an appendectomy without complete relief, suggested the diagnosis of a localized ileitis. The cecum was without demonstrable disease. Exploration explained the palpable tumor by finding the omentum adherent to the scar of the peritoneal incision of the previous operation.

The cecum and the ceco-colic segments of the large intestine are subject to inflammatory reactions of degrees varying from simple catarrhal irritation to extensive ulceration by bacterial invasion of the walls. Primary non-specific typhlitis occurs not because of any uncommon virulence of the usual flora, but because other conditions have favored the entry of those bacteria into the tissues of the wall. This intestinal segment always shows the most abundant bacterial growth of any part of the gastro-intestinal tract, due to the factors of slow segmental transport and greater fluidity.

Typhlitis, simple and catarrhal in type, often accompanies a pathological appendix and may be more significant to the clinical syndrome than the altered appendix. Also, the failure to correct a residual simple typhlitis will spoil the clinical result of many valid appendectomies. By simple catarrhal

typhlitis is meant a chronic, afebrile, more or less extensive colitis. It may occur without a demonstrably altered or tender appendix and may itself wholly account for the clinical syndrome. In the roentgen ray the feathery contour of the barium enema filled cecum will reveal the mucus which characterizes the condition, and there will be an accelerated motility of the cecum due partly to its irritable state and partly to impaired absorption.

Primary, non-specific inflammatory typhlitis is distinguished by the exclusion of cecal tuberculosis, actinomycosis, amebiasis and typhoid, and by the fact that the only bacterial agents found are the usual inhabitants of the cecum. The various degrees of primary typhlitis require clinical differentiation from primary appendicitis, and from the specific acute forms of typhlitis. It is important that non-specific typhlitis has an incidence very much greater than is commonly supposed and that its surgical varieties are more frequent than are those due to specific organisms, with the exception that secondary tuberculosis of the cecum occurs in a large majority of all cases of the open pulmonary disease.

The symptoms of typhlitis vary according to the degree of irritation or inflammation and to the pathological reaction of the tissues. Diarrhoea is more usually present with advanced typhlitis than with appendicitis except as the two conditions are co-existent. The pain or discomfort of typhlitis is post-digestive in time, three to four hours after meals, and often colicky in character. This may be superimposed upon a constant dull ache.

Simple catarrhal typhlitis has protean symptoms of bloating or "gas," distention, constipation, and occurs without fever or other toxic symptoms. The other manifestations of nervous dyspepsia are present and indigestion forms the patient's chief complaint. Disturbances in the motility and secretion of the stomach may be reflexly produced. Diffuse tenderness over the cecum may be the only physical sign. This will be followed by muscular rigidity and an indefinite tumefaction as the condition advances, when either chronic peri-typhlitic adenitis occurs, or a primary, ulcerative typhlitis develops. This latter may be an acute ulcerative typhlitis, or a more chronic, primary, non-specific granulomatous pathology. The terminal ileum often shares in the pathology.

With advance beyond a simple primary, catarrhal typhlitis, the symptoms become more severe and acute; diffuse discomfort changes to more localized pain; constipation often is replaced by diarrhoea, especially in

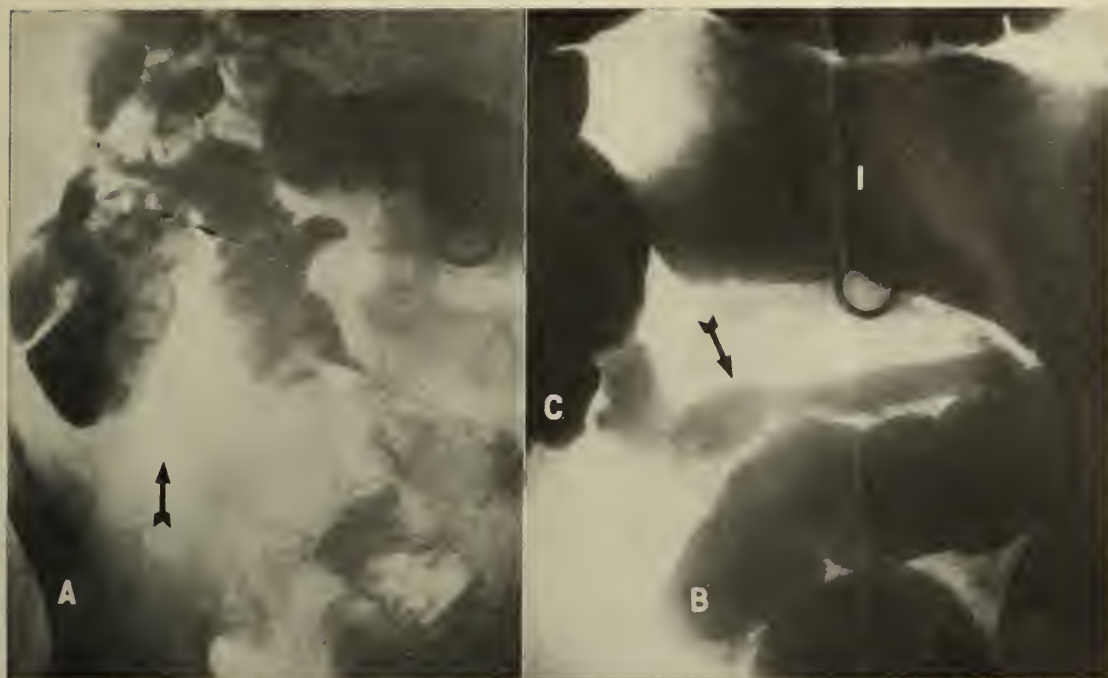


FIGURE 3. NON-SPECIFIC ILEITIS.

- A. The terminal ileum is reduced to a narrow lumen showing by a thin line (arrow), and the more proximal loops of small intestine are slightly dilated. The cecum was normal by barium enema. Operative confirmation. Figure 4 shows resected specimen.
- B. The terminal ileum (arrow) exhibits a moderately narrowed aperistaltic channel through which the barium enema passed to fill a greatly dilated loop of distal ileum (I). The cecum (C) was uninvolved. Operative confirmation.

the absence of a sigmoid redundancy, where absorption would buffer the proximal hypermotility. Local tenderness increases and may become exquisite if the serosa of the cecum is involved. Fever accompanies the ulcerative processes.

There is no clinical or roentgenologic means whereby primary typhlitis may be differentiated from specific forms. The roentgen ray will not make a tissue diagnosis. Simple, primary, catarrhal typhlitis has no accompaniments suggesting or accounting for a specific agent. The milder cases of primary, ulcerative typhlitis resemble amoebic disease of the cecum, and severe, primary ulcerative typhlitis duplicates undistinguishably ulcerative tuberculosis of the cecum, except that no associated active pulmonary disease can be demonstrated. The palpable tumor of a granuloma must suggest cancer even at the earlier age of the occurrence of typhlitis. Typhlitis may be part of a pan-colitis of any variety. The fact that colitis commonly affects the distal segments earlier and more severely, serves to emphasize the different nature of a process segregated to the right colon.

Typhlitis disturbs the physiology of the ceco-colon in a manner to exhibit a characteristic handling of the barium meal and enema. The degree of these alterations of phys-

iology indicates the severity of the inflammatory process, and in late stages of the process, the anatomical alterations themselves may be evident by filling defects in the barium shadow. The disease causes irritability of the segment, interferes and stops absorption, and by both these conditions, increases segmental motility.

Simple catarrhal typhlitis will be manifested by more or less pronounced increase in roentgenologic motility of the segment. Instead of the cecum and ascending colon only, of all the large intestine, showing barium at the six-hour period, the contrast substance will have advanced well into the transverse colon. At twenty-four hours, instead of the proximal colon showing, as usual, a considerable barium residue, it will have cleared itself almost completely of this contrast substance. The barium enema will show the right ceco-colon orthotonic or slightly hypotonic, and the contours will be variably irregular, foamy or moth-eaten, because of mucous exudate upon the luminal surface. The cecum has free mobility. The ileocecal valve often will be incompetent. Peristalsis cannot be elicited by palpation as no palpable irritability is present. Tenderness to palpation is moderate and diffuse over the cecum.

In ulcerative typhlitis the affected segments

show all of these changes in motility, in degree according to the progress of the pathology. Tenderness increases. Irritability increases into spasm; and peristalsis and emptying of the ceco-colon may now be stimulated by regional abdominal palpation and observed fluoroscopically. Peri-typhlitis and regional adenitis are evidenced by fixation of the ileocecal juncture. Granuloma is revealed by a filling defect in the contour of the cecum, which coincides with a palpable mass. In advanced stages of the disease, the reactions are quite the same as in secondary tuberculosis of the cecum.

The roentgenologic signs which lead to the diagnosis of ileocecal tuberculosis are not specific effects of the tubercle bacillus, but are seen in any irritative and ulcerative disease of the cecum. When used in the roentgenologic work of tuberculosis sanatoria upon tuberculous patients, these signs may however be accorded an almost pathognomonic significance, indicating tuberculosis; but when used in a general hospital, they must be interpreted with greater discrimination. It is true that these signs were first observed in tuberculous patients and have been considered the classic sign of the ileocecal tuberculosis simultaneously described by Stierlin and Pirie; but in the absence of open pulmonary tuberculosis, they cannot have the direct significance originally accorded. Cancer of the cecum may give the same segmental hypermotility as a tuberculoma.

The principal sign of ileocecal or ceco-colic ulceration, the progressively increasing intolerance of the cecum to any content, makes it non-retentive of the barium meal, which normally would accumulate and tarry in that segment, because it of all the large intestine has the least tonus and slowest normal motility. In the late cases with extensive ulceration, the intolerance of the cecum is readily demonstrated by any meal test or by a barium enema. It will be appreciated that spasm and hyper-peristalsis are more prominent manifestations than is the contour defect of the lesion itself.

The irritability of the cecum in the very early stages, when its intolerance of barium is not so definite and constant, may be elicited during fluoroscopic palpation. This maneuver allows diagnosis to be advanced to an earlier stage. In all cases of ulcerative involvement, peristalsis of the terminal ileum may be excited by palpation. This will result in its clearance into the partially filled or empty and relaxed cecum, which will, together with the ascending colon, contract and propel the barium mass forward. Ensuing

spasm of the ceco-colon then inhibits temporarily further peristalsis of the ileum.

Whenever in the course of gastro-intestinal roentgenology the cecum is empty at a time when normally it should be filled, further study by duplicate contrast meals should be made to confirm or dismiss the very pertinent suggestion of ulcerative involvement. The emptying of the cecum, as induced by direct palpation, will not be observed in other than cases of primary or secondary ulcerative typhlitis, although palpation to determine cecal mobility and appendiceal tenderness is a routine maneuver at the twenty-four hour period of all gastro-intestinal roentgenologic observations.

Three cases may be briefly reviewed. A school girl, aged 18, acquired a persistent but moderate diarrhoea. Fever soon began and presented the afternoon rise so usual with tuberculosis. Loss of weight was gradual and therapy was without effect. Hospitalization was postponed to allow graduation. Her symptoms were progressive during four months, after which the patient went to the hospital where a complete examination was secured. The diarrhoea had increased moderately and the fever now reached 104° in the afternoons. There was palpable resistance and tenderness over the cecum and a sense of tumefaction. The lungs gave no evidence of active disease, but a few calcified nodes were present. Gastro-intestinal roentgenology showed definitely localized disease of the cecum. In consultation I advised resection of the cecum, but it was decided to continue bed rest and medical management longer.

Two months later operation was accepted in the sense of a last resort and the cecum, ascending colon and terminal ileum were resected by Dr. A. O. Fischer. The surgical operative note was as follows: "Right rectus incision through the muscle was made. There was a small amount of free fluid, and extensive involvement of the terminal ileum, the cecum and ascending colon consisting in a thickening of the entire bowel wall, usual with tuberculosis. The neighboring mesenteric glands were likewise enlarged except in the angle at the ileocecal junction. The involved portion of the ileum and large bowel was resected, going well above the diseased tissue at either end. This necessitated taking out about 10 to 12 inches of ileum and the large bowel somewhat distal to the hepatic flexure. The ends were turned in in the usual way. The posterior peritoneum was sutured, leaving a rubber drain in the retro-peritoneal space. The lateral anastomosis was made between the ileum and transverse colon. A small catheter was inserted into the ileum proximal to the anastomosis to relieve any possible tension."

Recovery from the operation was ideal; and the reversal of the clinical course was spectacular; the hyperpyrexia ceased at once and nutrition immediately improved. In ten weeks the patient gained from 89



FIGURE 4.

The Resected Intestine from the case illustrated by the roentgen ray in Figure 3-A.

Above is a roentgen ray of the barium-filled resected ileum and cecum, and below is a photograph of the resected intestinal segment. The ileocecal valve at which the pathology terminated distally is indicated by the arrow.

pounds to 125 pounds. She has been in perfect health for three years since the operation. The clinical picture, except for the absence of pulmonary tuberculosis and the absence of bacilli in the stools, was the same as that seen in secondary ulcerative tuberculosis. The gross specimen was indistinguishable from secondary ulcerative tuberculosis. Histologic examination showed no evidence of tuberculosis but only chronic inflammatory disease.

Another young woman, aged 29, was investigated for chronic appendicitis because of pain and discomfort in the right lower quadrant of the abdomen. The gastro-intestinal roentgen ray showed a definite deformity of the cecum about the ileocecal valve. Subsequent examination revealed definite moisture in the lungs and a constant but slight temperature, and without any demonstration of tubercle bacilli in the very scant sputum. During a period of three months all signs of pulmonary activity and the temperature disappeared and she gained over twenty pounds. Once there occurred transitory symptoms of acute intestinal obstruction. In spite of the clinical improvement the

ileoceleal lesion had increased in size. The cecum and terminal ileum was resected by Dr. Fischer. His operative note read as follows: "Right rectus incision through the muscle was made. There was no free fluid in the peritoneal cavity. The cecum was fixed by old adhesions and could not be delivered easily. At the ileocecal junction there was a diffuse inflammatory process which had caused a great deal of induration. The inflammatory process did not involve much of the cecum itself beyond the ileocecal valve, but the terminal ileum was extensively involved and there were numerous areas of inflammation probably at the site of Pyers patches. These ulcerative areas extended up the ileum for about eighteen inches beyond which point no more were found. The mesentery was extensively involved in this tuberculous process, the glands being enlarged over a considerable area.

"Resection of the involved portion was begun proximal to the highest lesion. The end of the ileum was turned in in the usual way and the diseased portion of the intestine was carefully removed. It was impossible to include the mesentery in this dissection for fear of interfering with the blood supply, so that resection included the cecum and a portion of the ascending colon. The colon was turned in in the usual way. The posterior peritoneal edges were approximated with a running stitch covering all the raw surfaces, leaving a cigarette drain in the retro-peritoneal space. A lateral anastomosis was made between the terminal ileum and ascending colon with a stoma which admitted two fingers. A small catheter was inserted in the ileum proximal to the anastomosis as a measure of safety by the Witzel method and the intestine at this point sutured to the peritoneum. One more small drain was placed at the site of the anastomosis and the wound closed in the usual way in layers."

The patient's recovery from the operation was excellent. She has been in perfect health since. The resected tissue showed characteristic tuberculosis histology.

A young man, aged 23, entered the hospital because of attacks of abdominal cramps and vomiting, which had increased greatly in frequency and severity, since he had visited the out-patient department two years previously. He had been a patient in the hospital one year previously. During the periods of abdominal cramping, an intestinal pattern was evident across the lower abdomen. There was a definite mass palpable in the right lower quadrant which was moderately tender to palpation. Roentgenologic studies localized the palpable mass to the terminal ileum, revealed a cecum of normal contour and showed moderately dilated small intestinal forms. The diagnosis was small intestinal obstruction due to inflammatory disease of the terminal ileum.

Dr. Y. A. Olch operated and his note read as follows: "Opening the peritoneal cavity about 50 cc. of straw colored fluid was found and evacuated. The terminal ileum, from a point 2 cm. above the ileocecal valve and extending for a distance of about 15 cm., was very hard, and in the middle of this region there

was a definite area of stenosis. On the serosal surface there were many small translucent nodules. All the tissues were edematous and the ileum above this point was thickened and showed the effect of long standing chronic obstruction. Just above this point the patient also had Meckel's diverticulum which, however, showed no gross effect of inflammation. The first part of the cecum and about twenty inches of terminal ileum were resected and a lateral entero-colostomy was made."

The patient made a good recovery and has been well ever since. The histologic examination of the specimen gave no evidence of tuberculosis, but only non-specific, chronic inflammatory disease.

These cases illustrate instances of unavoidable surgical indication in both suspected and presumptive intestinal tuberculosis and they demonstrate not only the difficulties of clinically making an etiologic diagnosis but the excellent clinical result from the surgical extirpation of the pathology.

616-627 Beaumont Medical Building.

CONVULSIONS IN INFANCY AND CHILDHOOD

W. CHARLES BOSWELL, M.D.

Macon

The treatment of convulsions in children and infants presents one of the greatest problems with which the practicing physician has to deal and demands immediate diagnosis and treatment. They may occur at the most unexpected times and on occasions when the physician himself is least accessible and are always terrifying to the parents especially the occurrence of the first one in that particular child. By a convulsion is meant a series of involuntary contractions of a group or of several groups of muscles usually associated with a loss of consciousness or cerebral function. It is not a disease itself but a symptom of some underlying disease process. They are usually in themselves not fatal but there is always some degree of cerebral damage which may or may not be permanent, but at best lowers the threshold so as to make easier recurrence of future attacks. The first problem is always of course the control of the acute attack followed if possible by a differential diagnosis so as to prevent recurrence. In discussion we shall reverse the procedure and discuss first the etiology and sec-

ondly treatment, attempting to classify causation as to age groups as early as possible.

New Born Infants

In this group the most common cause is cerebral injury usually hemorrhage although edema may play a part in some cases. Factors involved in this type of injury are prematurity because of the imperfect development of the cranial structure and fragility of the blood vessels, spontaneous or too rapid labor, instrumental deliveries, breech deliveries or combination of these factors, although there is occasionally a history of normal delivery. The convulsions may begin from a few hours to several days after delivery, varying in degree and usually accompanied by other symptoms of cerebral hemorrhage in the new-born such as failure to nurse, alternating pallor and cyanosis, and inability to cry. A child seen three months ago in the Macon Hospital with severe and constantly recurring convulsions despite treatment beginning on the seventh day postpartum and persisting until death four days later on post-mortem examination showed a massive hemorrhage in the right frontal lobe accompanied by marked softening and necrosis of brain tissue.

First to Seventh Month

Convulsions in this period are relatively infrequent due to the fact that the period of birth injury has passed and tetany and infectious diseases have not yet begun, the most common causes being congenital anomalies such as hydrocephalus and microcephalus, residues of birth injuries, severe skin infections and septicemias due to invasion of the blood stream by bacteria from the nasopharynx or umbilicus.

Seven Months to Five Years

Convulsions are probably more prevalent in this age period than in any other and in addition to the causes listed above we have tetany or spasmophilia, acute infectious diseases, toxins liberated from the gastro-intestinal tract and occasionally syphilis, brain tumor or epilepsy. In the acute infections the convulsive attacks may be due either to an invasion of the blood stream by bacteria or to a dysregulation of the water balance of the body producing a cerebral edema. In

*Read before the Sixth District Medical Society, Macon, December 7, 1932.

addition a large percentage of attacks in this period are due to tetany either active or latent with disturbances in the calcium metabolism. In typical cases of tetany with carpopedal spasm, positive Chvostek's and Trouousseau's sign and laryngeal stridor the diagnosis may be made clinically without laboratory aid but in the so-called latent tetany the picture is more difficult. This syndrome is often associated with the interrupted healing of rickets in the spring and fall months. In a number of cases there is a history of convulsive signs but without clinical signs of tetany or rickets but with a diminution of the total blood serum calcium. However, there may be cases of convulsions when the serum calcium is within normal limits. This has been explained on the basis of a disturbance in the physico-chemical state of calcium as it is known that ionized calcium only acts as a sedative in the regulation of neuromuscular irritability. In cases of convulsions occurring apparently as the result of teething or of intestinal worms there is probably a latent tetany present and the above probably act as exciting factors. Latent tetany first becomes evident about the time of the cutting of the first teeth.

Five to Twelve Years

In this period some of the factors already mentioned may play a part but by far the larger percentage of the cases are epileptic in nature although other causes should be ruled out before this diagnosis is made. A family history of seizures or history of repeated periodic attacks in the child are often an aid in the diagnosis. Another cause occasionally encountered in this age period is acute nephritis with uremia.

As regards treatment the first objective is of course to terminate the convulsions with as little delay as possible and after that to attempt to determine the underlying causes. The following agents and procedures have been recommended:

1. Protect the patient against injury to himself.
2. The hot mustard bath is useful and probably acts by decreasing cerebral edema.
3. Cold sponges should be used in cases of hyperpyrexia.
4. One to three ounces of fifty per cent magnesium sulphate by mouth or rectum may be used to

decrease cerebral edema.

5. Saline or soapsuds enemas are of value especially in cases of intestinal toxemias with a febrile reaction and may be sufficient in itself to stop the convulsion.
6. Ten per cent magnesium sulphate intramuscularly or intravenously is often employed. If the latter method is used it should be given very slowly. The former method is usually preferable and may be given in doses of 2 c.c. per kilogram of body-weight, one-half given at once and the other half in thirty minutes to two hours. as retention enemas in starch paste or milk and
7. Chloral hydrate and sodium or calcium bromide repeated in one to two hours if necessary may give remarkable results, but it must be borne in mind that infants tolerate relatively large doses of both of these drugs.
8. In severe cases ether or chloroform anesthesia may be necessary.
9. Narcotics have been recommended by some, but in small children it may be difficult to estimate the proper dosage without giving too much of the drug.
10. Where a bulging fontanelle is present, lumbar puncture may be of value both for diagnosis and to relieve intracranial pressure.
11. In the type accompanying tetany, calcium is indicated both orally and parenterally. Calcium gluconate is probably the form best adopted to intramuscular or intravenous use and the dosage most often used is one-fourth to one-half gram. For oral administration the chloride and lactate are often used although calcium gluconate is perhaps more easily absorbed and relatively large doses are tolerated.
12. In acute nephritis with convulsions the treatment is essentially the same as in adults.
13. In birth injuries lumbar punctures, intramuscular injections of small amounts of whole blood in an attempt to prevent further hemorrhage and sedatives are beneficial procedures.
14. As to epilepsy our knowledge is still very limited. Ketogenic and dehydration diets, removal of possible foci of irritation and other measures have all been used to a great degree with some good results, but also with many failures. Phenobarbital is probably the best drug at our disposal in the treatment of this condition.

After the convulsion has ceased phenobarbital repeated at intervals is very useful in preventing further recurrence. Elixir phenobarbital containing one-fourth grain of phenobarbital per fluid dram is a convenient preparation to use for children.

I wish to stress again in closing the probability of latent tetany as a causative agent in a large percentage of convulsions in children of undetermined etiology and to urge treat-

(Continued on Page 270)

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

JULY, 1933

THE NEW BOARD OF HEALTH

At the recent session of the legislature. the act creating a new State Board of Health. sponsored by the Medical Association of Georgia, the Georgia Dental Association and the Georgia Pharmaceutical Association, was enacted into the law and approved by Governor Eugene Talmadge on March 24, 1933.

The composition of the new Board is as follows: "Section 15. The Board of Health shall be composed of 14 members appointed by the governor and confirmed by the Senate, four from the state at large and one from each congressional district, provided that such appointments shall be made from lists of nominees submitted to the governor by the governing members of the Medical Association of Georgia, the Georgia Dental Association, and the Georgia Pharmaceutical Association. The nominees submitted by the governing body of the Georgia Pharmaceutical Association shall be from the state at large and shall be at least four in number from which two appointments shall be made by the governor. The nominees submitted by the governing body of the Georgia Dental Association shall be from the state at large and shall be at least four in number from which two appointments shall be made by the governor. The nominees submitted by the Medical Association of Georgia shall be at least twenty in number, two from each congressional district, from which ten appointments, one from each congressional district, shall be made by the governor. A majority of all the members of the Board shall, at all times, be practicing physicians in the state of Georgia. The governor shall be ex-officio, a member of said Board of Health."

From the lists of names submitted by the Associations mentioned above, Governor Eugene Talmadge has made the following appointments; members representing the Med-

ical Association of Georgia with expirations of terms follows:

1st District—Dr. Cleveland Thompson, Millen, Sept. 1, 1939.

2nd District—Dr. C. K. Sharp, Arlington, Sept. 1, 1939.

3rd District—Mr. R. C. Ellis, Americus, Sept. 1, 1936.

4th District—Dr. Marvin M. Head, Zebulon, Sept. 1, 1937.

5th District—Mr. Robert F. Maddox, Atlanta, Sept. 1, 1936.

6th District—Dr. A. R. Rozar, Macon, Sept. 1, 1938.

7th District—Dr. M. M. McCord, Rome, Sept. 1, 1938.

8th District—Dr. Henry W. Clements, Adel, Sept. 1, 1938.

9th District—Dr. L. C. Allen, Hoschton, Sept. 1, 1939.

10th District—Dr. Wm. A. Mulherin, Augusta, Sept. 1, 1937.

Members from the state at large representing the Georgia Pharmaceutical Association:

Dr. T. C. Marshall, Atlanta, Sept. 1, 1935.

Dr. Claud Rountree, Thomasville, Sept. 1, 1935.

Members from the state at large representing the Georgia Dental Association:

Dr. M. H. Varn, Atlanta, Sept. 1, 1934.

Dr. Robert F. Sullivan, Savannah, Sept. 1, 1934.

The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.

CORRECT AND RETURN YOUR DISCUSSIONS

During the past several weeks we have been sending to all of those who participated in the scientific meetings of our recent annual session stenographic copies of their discussions. Only a few have been corrected and returned. We are sending out these copies of the discussions promptly so that all participating members may have ample opportunity to correct or rewrite them before publication in the *Journal*. Now is the time to see that your discussion properly states your views. Unless corrections are received promptly they will be published as transcribed by the official stenographer. Major corrections or changes cannot be permitted

after the galley proof is sent for approval since this would entail much additional expense for the Association.

MEETING OF THE COUNCIL

June 29, 1933

At a meeting of the Council held at the Academy of Medicine, Atlanta, on June 29, 1933, the following members were present:

President, Dr. Chas. H. Richardson, Macon.

President-Elect, Dr. C. L. Ayers, Toccoa.
Secretary-Treasurer, Dr. Allen H. Bunce, Atlanta.

First District, Dr. Cleveland Thompson, Millen.

Second District, Dr. J. A. Redfearn, Albany.

Third District, Dr. J. C. Patterson, Cuthbert.

Fourth District, Dr. Kenneth S. Hunt, Griffin.

Fifth District, Dr. W. A. Selman, Atlanta.

Sixth District, Dr. H. G. Weaver, Macon.

Seventh District, Dr. M. M. McCord, Rome.

Eighth District, Dr. J. E. Penland, Waycross.

Ninth District, Dr. Grady N. Coker, Canton.

Tenth District, Dr. H. M. Fullilove, Athens.

Dr. T. F. Abercrombie, Commissioner of Health, discussed the problem of prophylactic vaccination by health officers throughout the state. After a general discussion the Council pledged the cooperation of the Association in the prevention of all communicable diseases in the state. Dr. Abercrombie read the following resolution unanimously adopted by the Georgia Public Health Association on May 5, 1933.

"Realizing that a close cooperation between the members of the county medical society and the county board of health is essential for the promotion of a well-rounded public health program, we, as members of the Georgia Public Health Association, pass the following resolution:

"That all controversies which may arise concerning the policy or program of a county health department shall be adjusted through the county medical society and the county board of health.

"That the Association goes on record as opposing in principle any practice of medicine by the county commissioner of health in competing with private physicians and also urges that the family physician practice preventative medicine whenever possible and ad-

minister such vaccines and serums as is necessary to their private patients.

"That the members of this Association pledge themselves to the support of organized medicine and will render all assistance possible towards a better cooperative feeling between the members of the Medical Association of Georgia and the Georgia Public Health Association.

"M. E. WINCHESTER, M.D.

Secretary-Treasurer,

Georgia Public Health Association."

Dr. Abercrombie stated: "I know this resolution expresses the views and wishes of every health officer and all others engaged in public health work in Georgia."

The Council adopted a resolution requesting the city of Atlanta not to admit pay patients from the state at large to the Grady Municipal Hospital.

Each Councilor made a report on the condition of the membership of the county societies in his district. In this connection, the Council strongly urges that all constituent county societies be particularly careful in selecting efficient and industrious secretaries, since the greatest burden in maintaining membership is carried by them. Many of the secretaries of the county societies have already reported paid up members in excess of those reported last year. These were particularly commended.

The Council carefully scrutinized the income and expenses of the Association in order to maintain a balanced budget notwithstanding the decrease in dues for the year 1934.

THE MILWAUKEE SESSION OF THE A. M. A.

C. W. ROBERTS, M.D.

Atlanta

The eighty-fourth annual session of the American Medical Association met in Milwaukee, June 12-16, inclusive. About 4,500 doctors attended exclusive of the families of physicians, exhibitors and guests. The total attendance was approximately 6,000.

It was recalled with interest that Milwaukee was hostess to the A. M. A. in 1893 exactly 40 years ago, and that at that time the country was in a panic similar to the one we are now experiencing.

The scientific program consisted of excellent papers, well illustrated with lantern slides, drawings, etc., given in the 15 sections into which the various specialties were divided. A highlight in the scientific program was the clinical lectures given on Monday and Tuesday by outstanding specialists in

the various lines. They were well attended and were sufficient within themselves to have justified attendance on the meeting.

There were in attendance from Georgia, 32 physicians. Participating in the program were the following Atlanta physicians: In the section on Obstetrics, Gynecology and Abdominal Surgery, Dr. Lee Bivings read a paper entitled "Preconceptional and Prenatal Influences Affecting the New Born"; Dr. J. R. McCord, Secretary of the Section on Obstetrics, Gynecology and Abdominal Surgery, was honored by re-election to this position. In the section on Pediatrics, Dr. Glenville Giddings presented a paper entitled "The Normal Sleep Pattern for Children and the Factors That Can Derange Such Pattern." This paper was discussed by Dr. M. Hines Roberts. In the section on Pathology and Physiology an interesting paper on "Leukemic Reticulo-Endotheliosis" was presented by Dr. A. G. Ford of Pasadena, Calif., and discussed by Dr. Roy R. Kracke of Atlanta. In the section on Urology a paper entitled "A Review of the Prostatic Problem Based on the Development of the Past Three Years" was discussed by Dr. Omar F. Elder. A most interesting paper presented in the section on Practice of Medicine was presented by Dr. J. M. Blackford, Seattle, Wash., on "The Late Results of Unoperated Gall Bladder Disease." Dr. Blackford is a brother of our fellow townsman, Dr. L. Minor Blackford.

The scientific exhibits section was replete with instructive exhibits and was very popular, large numbers of physicians being constantly instructed in the various booths. The following Atlanta physicians presented exhibits: Dr. Roy R. Kracke on Monocytic Leukemia; Dr. R. A. Bartholomew on Gross and Microscopic Specimens of Placental Infarcts; Dr. Glenville Giddings on Study of Child Sleep; Dr. W. W. Anderson on Congenital Malformations in Children; Dr. Jack Norris on Uterine Fibroids.

As usual, the commercial exhibits were of high order, well attended and highly instructive.

Highlights in the program were: The opening general meeting Tuesday evening, June 13. At this meeting Dr. Dean Lewis was installed as President, and gave a superb address on "The Place of the Clinic in Medical Practice." The retiring President, Dr. E. H. Cary of Dallas, Texas, who traveled some 100,000 miles and spent some nine months away from home during his incumbency as president-elect and president of the association, was presented with a medal attesting the high regard in which he is held by

the association. The President's reception and ball was held at Hotel Schroeder, 9:00 P.M., Thursday, June 15. This was a splendid occasion. The program was interspersed with alumni dinners, special dinners and a golf tournament. The Woman's Auxiliary of the A. M. A. was well attended and the local committee on Women's entertainment vied with those for the men.

The House of Delegates with Drs. W. H. Myers of Savannah, O. H. Weaver, Macon, and C. W. Roberts, Atlanta, representing Georgia, met at the Hotel Schroeder at 9:00 A.M. Monday, June 12th. Sessions of the House were held on Monday, Tuesday and Thursday. A delightful dinner was given to the officers and delegates by the State Medical Society of Wisconsin and the Medical Society of the Milwaukee County at the Wisconsin Club, 7:00 P.M., June 12th. The setting was in the beautiful Milwaukee German Club with all of the embellishments pertaining thereto. The occasion was a high point in the social program. The more serious work of the House of Delegates consisted of interesting recommendations and reports made by the several standing and reference committees. This year a new reference committee on Economics was appointed which among other things recommended for adoption, endorsement of the principles incorporated in the Minority Report on the Cost of Medical Care. This recommendation was adopted by the House of Delegates. This Committee also suggested inclusion in the curricula of medical schools a suitable course in medical economics.

Some other interesting actions of the House was the introduction of an addition to the paragraph on Contract Practice in the code of ethics which more nearly defines an acceptable contract, a resolution approving the classification of specialists and their proper designation in the directory of the American Medical Association, a resolution looking to the reduction of the number of students admitted to medical schools and the erection of higher barriers to the admission for licensure of graduates of European medical schools, a request that clinic material used by medical schools for teaching be limited to that actually needed for proper instruction of students, a suggestion that constituent societies study and educate their members on the provisions incorporated in the Minority Report on the Cost of Medical Care and a resolution requesting the Committee on Hygiene and Public Relations to use its good offices to ameliorate the harmful result of unabridged advertising of drugs and foods over the radio.

At the final session of the House of Delegates the following officers were elected: President, Dr. Dean Lewis, of Baltimore; President-elect, Dr. Walter L. Bierring of Des Moines, Iowa; Vice-President, Dr. Jno. H. Musser, New Orleans; Secretary and General Manager, Dr. Olin West, Chicago; Treasurer, Dr. Herman L. Kretschmer of Chicago; Speaker of House of Delegates, Dr. F. C. Warnshuis, Grand Rapids, Mich.; Vice-Speaker, Dr. Nathan V. Van Etten, New York. Trustees: Dr. Austin A. Hayden, Chicago; Dr. Chas. B. Wright, Minneapolis, Minn.

Dr. Allen H. Bunce, Atlanta, Georgia, a Trustee of the Association, was active as usual in the deliberations of the Board of Trustees and served on the sub-committee of the Board in charge of the Scientific Exhibits.

The following appointments were made by President Lewis and confirmed by the House of Delegates: To the Judicial Council, Dr. John O'Shea, of Spokane, Wash.; to the Committee on Medical Education and Hospitals, Dr. Jas. S. McLester, Birmingham, Ala., and to the Council on Scientific Assembly, Dr. J. E. Paullin, Atlanta.

The meeting place selected for 1934 is Cleveland, Ohio.

—Fulton County Medical Bulletin, Atlanta, July 6, 1933.

MEMBERS FROM GEORGIA WHO REGISTERED AT THE MILWAUKEE SESSION OF A. M. A.

Bartholomew, R. A., Atlanta
Bassett, Victor H., Savannah
Bivings, Lee, Atlanta
Boland, Frank K., Atlanta
Brown, Chas. T., Jr., Guyton
Bunce, Allen H., Atlanta
Byrd, T. Luther, Atlanta
Elder, Omar F., Atlanta
Erickson, Mary J., Thomasville
Fancher, Jas. K., Atlanta
Ferguson, Chas. H., Thomasville
Fountain, Jas. A., Macon
Fowler, R. W., Marietta
Franklin, R. C., Swainsboro
Garner, J. R., Atlanta
Giddings, Glenville, Atlanta
Kracke, Roy R., Decatur
Lancaster, E. M., Shady Dale
McCord, Jas. R., Atlanta
Metts, J. C., Savannah
Myers, Wm. H., Savannah
Norris, Jack C., Atlanta
Phillips, W. Parks, LaGrange
Pruitt, Marion C., Atlanta
Roberts, C. W., Atlanta

Roberts, M. Hines, Atlanta
Smith, J. G., McDonough
Weaver, O. H., Macon
Webb, Fred L., Macon
Wise, Samuel P., Plains
Wood, R. Hugh, Atlanta
Yampolsky, Joseph, Atlanta

OFFICERS AND COMMITTEES OF THE MEDICAL ASSOCIATION OF GEORGIA

OFFICERS

President.....Chas. H. Richardson, Macon
President-Elect.....Clarence L. Ayers, Toccoa
First Vice-President.....Jos. D. Applewhite, Macon
Second Vice-President.....W. W. Turner, Nashville
Secretary-Treasurer.....Allen H. Bunce, Atlanta
Parliamentarian.....John W. Simmons, Brunswick

DELEGATES TO THE A. M. A.

William H. Myers, (1933-4).....Savannah
Alternate, Wm. A. Mulherin.....Augusta
C. W. Roberts (1933-4).....Atlanta
Alternate, M. C. Pruitt.....Atlanta
Olin H. Weaver (1934-5).....Macon
Alternate, C. K. Sharp.....Arlington

COUNCIL

J. A. Redfearn, Chairman.....Albany
Grady N. Coker, Clerk.....Canton

Councilors

1. C. Thompson (1936).....Millen
2. J. A. Redfearn (1936).....Albany
3. J. C. Patterson (1936).....Cuthbert
J. Cox Wall (1935) (old 12th).....Eastman
4. Kenneth S. Hunt (1936).....Griffin
5. W. A. Selman (1934).....Atlanta
6. H. G. Weaver, (1934).....Macon
7. M. M. McCord (1934).....Rome
8. J. E. Penland (1934).....Waycross
9. Grady N. Coker (1935).....Canton
10. H. M. Fullilove (1934) (old 8th).....Athens
S. J. Lewis (1935).....Augusta

Vice-Councilors

1. Jas. C. Metts (1936).....Savannah
2. Chas. H. Watt (1936).....Thomasville
3. J. Cox Wall (1936).....Eastman
4. Enoch Callaway (1936).....LaGrange
5. Marion C. Pruitt (1934).....Atlanta
6. H. D. Allen (1934).....Milledgeville
7. W. H. Perkinson (1934).....Marietta
8. McCullough (1934).....Waycross
9. J. K. Burns (1935).....Gainesville
10. M. A. Hubert (1934).....Athens

COMMITTEES

Scientific Work

William R. Houston, Chairman (1934).....Augusta
Chas. E. Waits (1935).....Atlanta
S. T. R. Revell (1936).....Louisville
Allen H. Bunce, Secretary-Treasurer.....Atlanta

Public Policy and Legislation

Dan Y. Sage, Chairman (1934).....Atlanta
Grady N. Coker (1935).....Canton
A. R. Rozar (1936).....Macon
Allen H. Bunce, Secretary-Treasurer.....Atlanta
T. F. Abercrombie, Director, Department of
Public Health, State of Georgia.....Atlanta

Medical Defense

Wm. A. Mulherin (1934).....Augusta
J. O. Elrod (1936).....Forsyth
Frank K. Boland (1938).....Atlanta
J. A. Redfearn, Chairman of Council.....Albany
Allen H. Bunce, Secretary-Treasurer.....Atlanta

Hospitals

R. H. Oppenheimer, Chairman (1937)	Atlanta
K. McCullough (1934)	Waycross
Geo. F. Klugh (1935)	Atlanta
Arthur D. Little (1936)	Thomasville
D. Henry Poer (1938)	Atlanta

Abner Wellborn Calhoun Lectureship

Jas. E. Paullin, Chairman (1938)	Atlanta
H. I. Reynolds (1934)	Athens
Eugene E. Murphy (1935)	Augusta
Craig Barrow (1936)	Savannah
Frank K. Boland (1937)	Atlanta

Economics and Public Relations

R. M. Harbin, Chairman (1934)	Rome
Wm. A. Mulherin (1935)	Augusta
C. L. Ridley (1936)	Macon
Dan Y. Sage (1937)	Atlanta
C. W. Roberts (1938)	Atlanta
Mrs. J. Bonar White, President, Woman's Auxiliary, Ex-Officio	Atlanta

Necrology

A. J. Mooney, Chairman	Statesboro
T. J. McArthur	Cordele
G. Y. Moore	Cuthbert

Medical History of Georgia

Frank K. Boland, Chairman (1937)	Atlanta
William R. Dancy	Savannah
Arthur G. Fort	Atlanta

Crawford W. Long Memorial Prize

William R. Dancy, Chairman	Savannah
Stewart R. Roberts	Atlanta
V. P. Sydenstricker	Augusta
George Bachmann	Atlanta
Edgar R. Pund	Augusta

Cancer Commission

J. L. Campbell, Chairman	Atlanta
William H. Myers	Savannah
Chas. H. Watt	Thomasville
G. Y. Moore	Cuthbert
Emory R. Park	LaGrange
Chas. C. Harrold	Macon
R. M. Harbin	Rome
Albert F. Saunders	Valdosta
Grady N. Coker	Canton
G. T. Bernard	Augusta

Advisory Committee—Woman's Auxiliary

B. H. Minchew, Chairman	Waycross
Jas. N. Brawner	Atlanta
Ralston Lattimore	Savannah
Jas. L. King	Macon
Chas. A. Greer	Oglethorpe

Fraternal Delegate to the Georgia**Pharmaceutical Association**

C. L. Ridley	Macon
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Fraternal Delegate to the Georgia Dental Association

C. Hall Farmer	Macon
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Fraternal Delegates to Other State Meetings

To visit Alabama: F. B. Blackmar, Columbus; O. W. Roberts, Carrollton.	
To visit Florida: Arthur G. Fort, Atlanta; J. M. Smith, Valdosta.	
To visit North Carolina: C. W. Roberts, Atlanta; D. D. Walker, Macon.	
To visit South Carolina: Thos. M. Adams, Montezuma; Robt. L. Rhodes, Augusta.	
To visit Tennessee: W. W. Chrisman, Macon; M. M. McCord, Rome.	

Committee for Study of Maternal Mortality and Infant Deaths**First District**

Guy G. Lunsford	Millen
A. J. Waring	Savannah

Second District

I. M. Lucas	Albany
-------------	--------

S. L. Cheshire	Thomasville
----------------	-------------

Third District

Carl P. Savage	Montezuma
J. C. Patterson	Cuthbert

Fourth District

Thos. S. Bailey	Newnan
S. C. Rutland	LaGrange

Fifth District

J. R. McCord	Atlanta
M. Hines Roberts	Atlanta

Sixth District

Edward B. Claxton	Dublin
J. D. Applewhite	Macon

Seventh District

P. O. Chaudron	Cedartown
J. E. Lester	Marietta

Eighth District

John W. Simmons	Brunswick
G. T. Crozier	Valdosta

Ninth District

M. B. Allen	Hoschton
D. H. Garrison	Tate

Tenth District

S. S. Smith	Athens
Wm. A. Mulherin	Augusta

Ex-Officio

T. F. Abercrombie, Director, Department of Public Health for Georgia	Atlanta
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L. G. Hardman Silver Loving Cup

W. A. Selman, Chairman	Atlanta
Wm. A. Mulherin	Augusta
Chas. H. Watt	Thomasville
William H. Myers	Savannah
Chas. C. Harrold	Macon
Allen H. Bunce	Atlanta

POST-GRADUATE STUDY OF PEDIATRICS*To the Medical Profession of Georgia:*

At the recent meeting of the Georgia Pediatric Society the following Committee was appointed for the purpose of furthering post-graduate study of Pediatrics in the State of Georgia: Dr. W. L. Funkhouser, chairman; Dr. Hines Roberts and Dr. C. M. Burpee. The Committee met and believes that with the clinical material and teaching force of Emory University and the University of Georgia, a two to four weeks' intensive course could be given. The Committee thinks that, if the profession desires, this course, arrangements can probably be made with either institution to cooperate for this purpose. In order that we may know how many physicians are interested, we are writing this general letter to the profession of Georgia in order to determine their reaction. Any one interested will please communicate with the chairman, advising him as to the time of the year, the length of the course, and whether he would be willing to attend. There will be lectures, clinics, and demonstrations on all phases of pediatric work; the course could be given either in Atlanta or Augusta, depending upon the convenience to the majority. Please state in your communication if it is desirable to give the course this year or wait until next.

Address all communications to Dr. W. L. Funkhouser, 33 Ponce de Leon Avenue, N.E., Atlanta, Georgia.

GEORGIA STATE NURSES ASSOCIATION

Officers

President—Miss Alice F. Stewart, R. N., Augusta.
 First Vice-President—Miss Dora A. Kershner, R. N., Macon.
 Second Vice-President—Miss Lillian Cumbee, R. N., Emory University.
 Secretary—Miss Myrtice Young, R. N., Augusta.
 Treasurer—Miss Jane Van De Vrede, R. N., Atlanta.
 Miss Jane Van De Vrede, R. N.
 Executive Secretary

District Presidents

First—Mrs. Dorothy Treacle, R. N., Savannah.
 Second—Mrs. B. Y. Vann, R. N., Thomasville.
 Fourth—Miss Lucia Massee, R. N., Cuthbert.
 Fifth—Mrs. Sue B. Paille, R. N., Atlanta.
 Sixth—Mrs. Sarah P. English, R. N., Sandersville.
 Seventh—Miss Shirley Hamrick, R. N., Cedartown.
 Eighth—Miss Myrtle Jane Pinson, R. N., Athens.
 Ninth—Mrs. Laura P. Smith, R. N., Gainesville.
 Tenth—Mrs. Olive Barbin, R. N., Augusta.

Headquarters

131 Forrest Avenue, N. E., Atlanta.

A HOSPITAL TRUSTEE ASKS SOME QUESTIONS ABOUT NURSING

Reprinted from The American Journal of Nursing, May, 1933.

MILDRED WHITCOMB

Hospital Trustee—So you think I can help you solve most of your problems, young lady. Why?

Private Duty Nurse—Because you are a producer of nurses.

Hospital Trustee—If my hospital helped produce you, I'm proud, Miss R. N. Aren't you happy at being a full-fledged registered nurse?

Private Duty Nurse—I would be if I had a better chance for work.

Hospital Trustee—Well, of course, we have had a severe economic depression. But we are on our way out of that, I trust.

Private Duty Nurse—But it wasn't only the depression. There were too many nurses before the depression.

Hospital Trustee—So are there too many doctors, lawyers, teachers and engineers.

Private Duty Nurse—That's true. But our situation is much worse, the Grading Committee has found. And don't think the doctors, lawyers, teachers and engineers are sitting idle about their predicament.

Hospital Trustee—What are they doing that you can't do?

Private Duty Nurse—Nothing that we can't do with your help and cooperation.

Hospital Trustee—What do you suggest?

Private Duty Nurse—My professional organizations, both national and state, are working with the hospitals, urging some of them to close their schools and use graduates; others to improve their courses by university affiliations and other means, and to raise their entrance standards. They are asking that hospitals abolish student allow-

ances and use this money on developing the nursing schools. They want nursing courses made of true professional grade.

Hospital Trustee—What success are your organizations having? How many schools have closed?

Private Duty Nurse—In the last three years, 255 nursing schools have closed.

Hospital Trustee—That should encourage you.

Private Duty Nurse—It should, but it doesn't. The remaining schools are simply turning out more nurses. There are more graduates now than there were three years ago.

Hospital Trustee—What argument do your nursing organizations use in asking hospitals to close their schools?

Private Duty Nurse—For the small hospital, it has been found that a graduate staff is cheaper than trying to run a good nursing school. Graduate service in small hospitals is usually more satisfactory to doctors and patients.

Hospital Trustee—Just what do you mean by a "small" hospital?

Private Duty Nurse—The Duke Foundation found a graduate nursing staff much cheaper for hospitals of twenty-five beds. A sixty-bed Canadian hospital recently found that it saved 74 cents a patient per day by substituting a graduate staff for student nursing service.

Hospital Trustee—Well, suppose all the hospitals under fifty beds in the United States were convinced of this fact and closed their schools tomorrow. Would your troubles be over?

Private Duty Nurse—Unfortunately, no. It is the large hospitals, not the small ones, that are responsible for this overproduction of nurses.

Hospital Trustee—And are not the large hospitals taking the responsibility for the

number and quality of graduates they are turning out?

Private Duty Nurse—Many of them are. Some that can afford it, through special endowments and other funds, have abolished their schools and are finding their patients much better pleased with nursing service of true professional grade.

Hospital Trustee—Few hospitals can afford to be so generous. Most of them are having a terrific struggle to keep going.

Private Duty Nurse—We realize that. A number of them are omitting classes for a year, or are taking in only one class during the year. They have fewer patients and they do not need so many students. And they are finding graduates willing to make salary adjustments in order to get steady employment.

Hospital Trustee—Our own school, you know, has raised its entrance requirements. That is keeping out not only a good many students but a poor quality of students.

Private Duty Nurse—That is what we are so eager for. It isn't only that there are too many nurses, but that many of them are poorly qualified and poorly trained. Most of the good schools now accept only girls who have graduated in the upper fourth of their high school class. Others require one or two years of college work. One school even is soon to require a college degree.

Hospital Trustee—You said something about charging tuition. Do you think our hospital school could do that?

Private Duty Nurse—It could well do away with paying allowances to students and use that money for another full-time instructor and some new teaching equipment. Schools that have abolished allowances and are charging tuition are finding more applications than before—and of higher type.

Hospital Trustee—I should not want to recommend any of these things without giving them a good deal of study.

Private Duty Nurse—Of course, you wouldn't. We want you to study nursing questions. The more you study, the more help you will be to us in solving not only the nurses' problems, but—what is much more important—the hospital's nursing problems and even those of the whole community. You know, a hospital does not train nurses just to take care of its own patients. It conducts an educational institution for the benefit of the community. Community funds go into upkeep of the hospital and its school; community nursing service should come out.

Hospital Trustee—You are a real little crusader. What more do you ask?

Private Duty Nurse—I think our school of nursing should have its own committee to work with the principal of the school. It should be made up partly of board members, the hospital superintendent, a doctor or two, a nurse alumna and representatives of the public. We need to get the public interested in the training of nurses. Not many lay people see that the nursing care they get when they are sick is their own responsibility. They look into the training of the teachers in the schools, but they don't concern themselves with the training of the women who will look after them when they are sick.

Hospital Trustee—That's true, of course. The state conducts normal schools out of the public purse and sees that its teachers are adequately trained. I suppose we may live to see the day when nursing schools are supported by public taxation or by private endowment. Some time all nursing schools may be conducted by universities like other professional schools. It would be a great safeguard to the public. Then supply and demand in nursing would be more easily controlled.

Private Duty Nurse—Oh, I knew you would catch the idea. You have, and have carried it much further than I could conceive, although my professional organizations have that for one of their future goals. Thank you so much for your great understanding. Won't you hurry up and organize a nursing school committee so that you can be chairman of it and show the others the way?

Hospital Trustee—Well, I shall certainly give the nursing school more of my attention. And I think it would be a pretty good nursing school committee with some bright young R. N.'s like you as alumnae representatives.

Private Duty Nurse—Brighter days for nursing will come quickly when influential business men like you take a hand. I feel new confidence already. Good-bye and thanks.

CONVULSIONS IN INFANCY AND CHILDHOOD (Continued from Page 263)

ment of these cases with calcium, cod liver oil, viosterol and sunlight so as to correct as far as possible the calcium metabolism throughout the body.

REFERENCES

1. Peterman, M. G.: Convulsions in Childhood, *Minnesota Med.* 15: 91 (Feb.) 1932.
2. Peterman, M. G.: Convulsions in Childhood, *J. A. M. A.* 99: 546 (Aug. 13) 1932.
3. Graham, Stanley: Convulsions in Infancy, *Glasgow M. J.* 117: 113 (March) 1932.
4. Smith, J. T.: Convulsions in Infancy and Childhood, *J. Tennessee M. A.* 20: 273 (Dec.) 1927.
5. Chown, Gordon: Treatment and Causes of Convulsions in Infants and Children, *Canad. M. A. J.* 17: 191 (Feb.) 1927.

WOMAN'S AUXILIARY

OFFICERS

President—Mrs. J. Bonar White, Atlanta.
 President-Elect—Mrs. J. E. Penland, Waycross.
 First Vice-President—Mrs. J. J. Pilcher, Wrens.
 Second Vice-President—Mrs. R. C. Pendergrass, Americus.
 Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.
 Corresponding Secretary—Mrs. E. A. Allen, Atlanta.
 Treasurer—Mrs. Chas. Usher, Savannah.
 Historian—Mrs. E. R. Harris, Winder.
 Parliamentarian—Mrs. J. M. Barnett, Albany.

NINTH ANNUAL SESSION

The Ninth Annual Session of the Woman's Auxiliary was called to order on Thursday, May 11th, at 10:05.

Invocation by Rev. Ed F. Cook, Pastor of Mulberry Street Methodist Church.

Address of Welcome by Mrs. John A. Selden, Macon.

Response to Address of Welcome by Mrs. C. W. Roberts, Atlanta.

Mrs. J. D. Applewhite, Macon, Chairman of Credentials Committee, made a report of those present as follows: Number of delegates 17; state officers 9; district managers 3; chairmen of standing committees 7; chairmen of special committees 1; members registered 67.

Mrs. Wm. H. Myers, Savannah, conducted memorial services for deceased members as follows: Mrs. Walter Jackson Freeman, Mrs. M. F. Dunn and Mrs. R. L. Kennedy.

Minutes of the last annual session were read and adopted.

The Secretary read a wire from Mrs. Chas. C. Harrold, Past President of the Auxiliary. Motion carried to wire greetings and best wishes from the officers and members, and deep regrets on account of her absence.

Invitation to attend the Milwaukee session of the Auxiliary to the A. M. A. was read by the Secretary.

Dr. Chas. H. Richardson, Macon, President-Elect of the Association, was introduced by Mrs. S. T. R. Revell, Louisville. He spoke in his usual pleasing manner with many helpful suggestions and complimented the members of the Auxiliary on their organization and ability to render valuable assistance to the medical profession and laity.

Mrs. Chas. C. Hinton, Macon, spoke on the "Jane Todd Crawford Memorial."

Mrs. N. Peterson took the chair while Mrs. Revell made her annual report as President.

Mrs. Jas. N. Brawner, Atlanta, presented a corsage to Mrs. Revell, a gift of Dr. S. T. R. Revell; another was presented by Mrs. C. W. Roberts for the Jefferson County Auxiliary; Mrs. Ralston Lattimore, Savan-

nah, presented one for the Auxiliary.

Dr. Marvin M. Head through Mrs. Revell extended an invitation to all members to hear his Presidential Address.

Reports of officers and committees were accepted as follows:

President-Elect—Mrs. J. Bonar White, Atlanta.

First Vice-President—Mrs. Nichols Peterson, Tifton.

Third Vice-President—Mrs. Jno. W. Simmons, Brunswick.

Corresponding Secretary — Mrs. Fred Rawlings, Sandersville.

Treasurer—Mrs. Charles Usher, Savannah.

Mrs. C. L. Ayers, Toccoa, Chairman of the Auditing Committee, reported the books and accounts of the Treasurer neatly and accurately kept.

Report from the Southern Medical Association by Mrs. J. Bonar White, Atlanta.

Press and Publicity—Mrs. C. W. Roberts, Atlanta.

Health Film Library—Mrs. John A. Selden, Macon.

Student's Loan Fund—Mrs. Wm. Shearouse, Savannah.

Public Policy and Legislation—Mrs. Dan Y. Sage, Atlanta.

Revision Committee—Mrs. Ralston Lattimore, Savannah.

Constitution and By-Laws were adopted.

Motion by Mrs. Jas. N. Brawner carried to adopt the colors of blue, gold and navy, and a likeness of the Caduceus staff as an emblem, also that the Auxiliary for all its district organizations adopt a form for "Scrap Book" 10 in. by 12 in. to be made of suitable paper with cover paper in blue buckram binding and the name of the particular organization and emblem of the Auxiliary printed in gold.

Motion carried that preference must be given sons and daughters of physicians in making loans from the Student's Educational Loan Fund and especially for medical students.

Motion carried to commend our President,

Honorable Franklin D. Roosevelt, for the excellent work he has done to relieve the distressed people of our nation and for the return of normal financial conditions, also to assist through individual donations in the plan to build Georgia Hall at Warm Springs.

Motion carried that all presidents and district managers file written reports with the Secretary two weeks before each annual session. That such reports be condensed not to require over three minutes for presentation at the annual meeting; that annual reports shall be read by the presidents of respective organizations.

Motion carried that the work reported by any District Chairman shall include only work done by her in person and not the work by any county organization.

Motion carried that the Woman's Auxiliary to the A. M. A. be petitioned to assume the leadership in developing a plan for a suitable memorial for our pioneer heroine of surgery, Mrs. Jane Todd Crawford, who as a patient of Dr. Ephraim McDowell, submitted to the first ovariectomy on December 25, 1809. Also that copies of this resolution be mailed to the President of the Woman's Auxiliary to the A. M. A.

Resolutions by Mrs. D. H. Garrison, Tate were adopted to thank the press, hotels, Macon musicians, speakers, and the members of the Auxiliary to the Macon Medical Society for the delightful entertainments and many cordial courtesies extended during our annual session.

Mrs. Ralston Lattimore, Savannah, submitted nominations for election of officers for the ensuing year as follows:

President—Mrs. J. Bonar White, Atlanta.

Historian—Mrs. Ernest R. Harris, Win-der.

President-Elect—Mrs. J. E. Penland, Waycross.

First Vice-President—Mrs. J. J. Pilcher, Wrens.

Second Vice-President—Mrs. R. C. Pen-dergrass, Americus.

Third Vice-President—Mrs. Hugo John-son, Savannah.

Corresponding Secretary—Mrs. E. A. Al-len, Atlanta.

Recording Secretary—Mrs. W. A. Cole-man, Eastman.

Treasurer—Mrs. Charles Usher, Savan-nah.

Chairman of Student Loan Fund—Mrs. Benjamin Bashinski, Macon.

There being no nominations from the

floor, the Secretary was instructed and cast the entire ballot for the election of the above mentioned officers and they were declared elected by the President.

Mrs. J. Bonar White, Atlanta, was escorted to the chair by Mrs. John A. Selden, Macon, and was presented with the gavel by the retiring President. Mrs. White gracefully accepted her installation as President in a pleasing address, then introduced all other new officers as they were installed.

Mrs. Dan Y. Sage, Atlanta, presented a corsage of orchids to Mrs. White as a token of esteem from the Auxiliary to the Fulton County Medical Society.

Mrs. Wallace Bazemore, Macon, presented corsages to Mrs. White and to Mrs. Revell from the Auxiliary to the Macon Medical Society.

Meeting adjourned.

MRS. J. E. PENLAND,
Recording Secretary.

BOOK REVIEW

Behind the Door of Delusion, by "Inmate Ward 8." Pp. 325. Price \$2.00. New York: The Mac-millan Company, 1932.

To one who wants a too mildly interesting book for a few minutes' diversion before dropping off to sleep, to one who craves weird stories of the persecution of the inmates of a state hospital, this book will prove a disappointment. To all others, both physicians and lay persons, it should appeal tremendously. It is "Dedicated to a better understanding of those on the inside by those who are not yet locked in." In passing, it has been recommended by the American Psychiatric Society.

The anonymous author was a distinguished newspaper man who sought refuge in an asylum to break himself of dipsomania. Except for his addiction to alcohol, he was of more than a sound mind. He was thus able to present the patients' side, to give "the inside dope . . ." And how he could write! His rather affectionate respect for the attendants is striking; the physicians appear too far above him to figure prominently.

This book lends itself to comparison with "A Mind That Found Itself." The latter is more an autobiography, or psychobiography, to use a term coined by the late Gamaliel Bradford, of a single person, whereas "Behind the Door of Delusion" is more of a bird's eye view of the inside of such a hospital though the author's solution of his difficulties and plans for the future are of most profound interest. One wishes to know the sequel.

But, in the year 1932, why did the author refer to syphilis as "the malignant social disease"?

—L. M. B.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

INFANT AND MATERNAL MORTALITY

In statistical practice infant mortality and maternal mortality are expressed in terms of the number of deaths under one year of age per 1,000 live births, and the number of deaths in which the puerperal state is involved per 1,000 live births. Therefore, it is obvious that as birth registration becomes more complete these rates will show a decrease although there might be an actual increase in the number of deaths and conversely, as the completeness of birth registration decreases these rates will increase even though the number of deaths actually decrease. This explanation is given as a word of caution in drawing conclusions from infant mortality rates and puerperal death rates, and to emphasize the necessity of complete registration of births in order to know whether or not

TABLE A.—*Infant deaths under 1 year of age and deaths from puerperal causes with rates per 1,000 live births, in Georgia, 1922 to 1932*

Year	Infant Deaths (under 1 year)		Maternal Deaths (puerperal causes)	
	Total Number	Per 1,000 Live Births	Total Number	Per 1,000 Live Births
1922	4366	66.4	658	10.0
1923	5629	88.4	573	9.0
1924	5875	92.7	708	11.2
1925	4724	75.8	641	10.3
1926	4323	80.1	485	9.0
1927	4578	74.3	578	9.4
1928	4875	82.3	622	10.5
1929	4464	76.3	549	9.4
1930	4713	78.1	658	10.9
1931	4234	68.5	616	10.0
1932	4097	64.3	620	9.7

TABLE B.—*Infant deaths under 1 year of age per 1,000 live births, from specified causes, by color, in Georgia: 1931 and 1932.*

CAUSE OF DEATH	Total		White		Colored	
	1932	1931	1932	1931	1932	1931
All Causes	64.3	68.5	55.5	56.9	77.5	86.5
Measles	0.1	0.2	0.0	0.2	0.2	0.2
Scarlet Fever	0.0	0.1	0.1	0.1		0.0
Whooping cough	1.1	1.2	0.9	1.0	1.5	1.4
Diphtheria	0.3	0.3	0.4	0.2	0.1	0.4
Influenza	1.8	1.8	1.6	1.5	2.2	2.4
Dysentery	0.5	0.7	0.4	0.6	0.5	0.9
Erysipelas	0.3	0.2	0.4	0.3		0.1
Meningococcus meningitis	0.1	0.1	0.1	0.1	0.1	0.0
Tetanus	0.0	0.1	0.0		0.0	0.2
Tuberculosis (all forms)	0.3	0.2	0.2	0.2	0.4	0.2
Syphilis	1.1	1.2	0.3	0.4	2.5	2.4
Convulsions	0.6	0.5	0.3	0.3	1.1	0.8
Bronchitis	0.1	0.2	0.2	0.1	0.1	0.2
Broncho-pneumonia	3.8	3.4	3.5	2.7	4.4	4.5
Pneumonia	3.8	3.4	2.7	2.1	5.6	5.3
Stomach Diseases	0.5	0.4	0.3	0.2	0.6	0.7
Diarrhea and Enteritis Under 2 Years	4.3	5.6	4.6	4.9	3.8	6.6
Congenital Malformations	2.2	2.2	2.9	2.9	1.1	1.2
Congenital Debility	2.2	3.8	1.7	3.2	3.1	4.6
Premature Birth	17.1	18.7	17.6	18.7	16.4	18.7
Injury at Birth	2.2	2.4	2.6	2.6	1.6	2.1
Other Diseases of Early Infancy	2.1	2.0	1.8	1.9	2.5	2.2
External Causes	1.2	1.4	0.9	1.0	1.7	2.0
Unknown, Ill-defined	14.9	14.4	8.6	7.8	24.4	24.6
All Other Causes	3.7	4.2	3.6	4.0	3.8	4.6

there is a decrease in infant and maternal rates and the extent and degree of such decrease.

Table A presents the number of deaths under one year of age and the deaths from puerperal causes with corresponding death rates per 1,000 live births for the years 1922 to 1932. The infant mortality rates in the past decade show an average annual decrement of 1.2 per 1,000 live births. This reduction in the infant mortality rate is probably due, to some extent, to more complete registration of births but there are other factors that have had a far greater influence in reducing the infant mortality in Georgia. Each year more and more mothers have come to realize the importance of prenatal care, and that the health and life of the baby need the care of a physician, especially during the first twelve months of life. Table B

shows infant mortality rates by cause of death and color of child for 1931, and 1932. Premature birth, and diarrhea and enteritis under two years account for one-third of the total deaths under one year of age.

The death rate from puerperal causes in 1932 is 3 per cent lower than the rate in 1931. In the last decade the puerperal death rates show a slight annual increase although there is an actual annual average decrease of two deaths from puerperal causes. This seemingly paradoxical situation is due entirely to the fact that birth registration in the beginning of the decade was not as complete as in the latter part. In the year 1932, puerperal septicemia and puerperal albuminuria and eclampsia account for one-half of the deaths in the puerperal state as will be seen in Table C.

TABLE C.—Deaths and death rates per 1,000 live births from puerperal causes, by color, in Georgia: 1931 and 1932.

CAUSE OF DEATH	NUMBER						RATE PER 1,000 LIVE BIRTHS					
	Total		White		Colored		Total		White		Colored	
	1932	1931	1932	1931	1932	1931	1932	1931	1932	1931	1932	1931
Puerperal causes (Total).....	620	616	310	322	310	294	9.7	10.0	8.1	8.6	12.2	12.1
Abortion with Septic Condition.....	38	27	19	16	19	11	0.6	0.4	0.5	0.4	0.7	0.5
Abortion without Septic Condition.....	34	40	19	25	15	15	0.5	0.6	0.5	0.7	0.6	0.6
Ectopic Gestation.....	7	9	4	3	3	6	0.1	0.1	0.1	0.1	0.1	0.2
Other Accident of Pregnancy.....	25	17	14	11	11	6	0.4	0.3	0.4	0.3	0.4	0.2
Puerperal Hemorrhage.....	32	44	23	22	9	22	0.5	0.7	0.6	0.6	0.4	0.9
a—Placenta Previa.....	17	19	11	10	6	9	0.3	0.3	0.3	0.3	0.2	0.4
b—Other Puerperal Hemorrhage.....	15	25	12	12	3	13	0.2	0.4	0.3	0.3	0.1	0.5
Puerperal Septicemia.....	127	125	50	63	77	62	2.0	2.0	1.3	1.7	3.0	2.6
Puerperal Albuminuria and Eclampsia.....	193	191	101	99	92	92	3.0	3.1	2.6	2.6	3.6	3.8
Other Toxemias of Pregnancy.....	17	23	14	17	3	6	0.3	0.4	0.4	0.5	0.1	0.2
Puerperal Phlegmasia Alba Dolens, Embolus, Sudden Death.....	21	12	8	6	13	6	0.3	0.2	0.2	0.2	0.5	0.2
Other Accident of Childbirth.....	116	118	53	52	63	66	1.8	1.9	1.4	1.4	2.5	2.7
a—Cesarean Operation.....	10	8	9	5	1	3	0.2	0.1	0.2	0.1	0.0	0.1
b—Others under this title.....	106	110	44	47	62	63	1.7	1.8	1.2	1.3	2.4	2.6
Other and unspecified conditions of the Puerperal state.....	10	10	5	8	5	2	0.2	0.2	0.1	0.2	0.2	0.1

PROGRAM OF CLINICS

WARE COUNTY HOSPITAL

Waycross, Georgia

Tuesday, June 27th, 1933

2:00 P.M.—Urological—Doctors W. F. Reavis and W. C. Hafford, Waycross.

3:00 P.M.—Medical—Dr. J. E. Penland and Staff, Waycross.

(a) Report. Case of Bronchitis, another of Pneumonia, complicating Fungus Infection of the Throat.

(b) Laboratory Findings in Above Cases—Doctors J. E. Penland, G. E. Atwood, A. W. DeLoach and J. S. Holder, Waycross.

(c) Report. Two Cases Lung Infection, with Vincent's Spirochete. Illustrated by X-Ray Plates—Doctors Ansley Seaman, T. J. Fer-

rell and G. E. Atwood, Waycross.

(d) The Economic Aspect of Infant Feeding—Doctor C. M. Stephens, Waycross.

(e) Presentation of Case Malignancy with X-Ray Therapeutic Measures—Doctor D. M. Bradley, Waycross.

4:15 P.M.—Eye, Ear, Nose and Throat—Doctors W.

D. Mixson and B. H. Minchew, Waycross.

(a) Presentation of Cases. Intra-ocular Foreign Bodies Removed with Electric Magnet.

(b) Gunshot Wound of Orbit and Upper Lid. Producing an Ectropion Lower Lid.

(c) Operative Correction of Squint by Muscle Resection.

(d) Post Operative Dressing of Hospital Cases: Comment.

5:00 P.M.—Surgical—Doctor Raymond L. Johnson and Staff, Waycross.

- (a) Obstructing Hemorrhagic Adeno-Papilloma of the Ileum—Discussion by Doctors G. E. Atwood, H. J. Carswell and J. S. Holder, Waycross.
- (b) Carcinoma of the Stomach—Discussion by Doctors Kenneth McCullough, J. S. Holder and H. J. Carswell, Waycross.
- (c) Discussion and Comparison of Sclerosing Agents in the Treatment of Varicose Veins—Doctor W. Loomis Pomeroy, Waycross.
- (d) Fracture of the Pelvis with Separation of Lip of Acetabulum. X-Ray Plates Before and After Reduction and Fixation.
- (e) Cholecystectomy—Doctor Raymond L. Johnson, Waycross.

Buffet Supper—Guests of Woman's Auxiliary, Ware County Medical Society, Dining Room, Ware County Hospital.

NEWS ITEMS

Dr. Montague L. Boyd, Atlanta, was elected a trustee of the American Urological Association at its Chicago meeting on June 21st.

The Cherokee County Medical Society and Woman's Auxiliary held their annual picnic at the Lake Club near Canton on June 15th.

The Telfair County Medical Society met at the office of Dr. C. R. Youmans, Lumber City, on June 13th. After the scientific session, the members were entertained at the Club House on Little river at a fish fry.

Dr. and Mrs. W. V. Chandler, Baldwin, entertained the members of the Habersham County Medical Society and the Auxiliary at their home on June 15th.

Dr. Eugene E. Murphey, Augusta, was paid many glowing tributes by the Augusta Board of Health when he retired on June 9th after serving for more than twenty-five years as chairman. In the resolutions adopted it was stated that he was the first health officer in Georgia to recommend and use: Tuberculin tests for dairy cattle; establish mosquito control; chlorinate the city's water supply; establish municipal laboratory; establish routine inspection of school children, and to almost eliminate rabies.

The Society of Plastic and Reconstructive Surgery at its meeting held at the New York Academy of Medicine, New York City, May 26th, adopted resolutions condemning sensational presentations of plastic surgery by irresponsible and non-representative individuals and groups.

The Chattahoochee Valley Medical and Surgical Association held its annual session at Radium Springs, Albany, July 11-12. Members of the Medical Asso-

ciation of Georgia who appeared on the program were as follows: Dr. Howard Hailey, Atlanta, read a paper entitled "Hypertrichosis"; discussed by Dr. Jack Jones, Atlanta, and Dr. J. M. Sigman, Macon. Dr. J. A. Redfearn, Albany, "Simple Artificial Pneumothorax with Demonstration"; discussed by Dr. Dan Elkin and Dr. Hal M. Davison, both of Atlanta. Dr. Willis P. Jordon, Columbus, "Sedimentation in Urological Conditions"; discussed by Dr. E. G. Ballenger and Dr. W. L. Champion, both of Atlanta. Dr. W. S. Goldsmith and Dr. Stewart R. Roberts, Atlanta, "The Relation of Cardio Vascular Disease to Major Surgery"; discussed by Dr. T. E. Rogers, Macon, and Dr. T. C. Davison, Atlanta. Dr. Frank K. Boland, Atlanta, "Stone in the Common Duct"; discussed by Dr. Wm. H. Myers, Savannah. Dr. W. W. Chrisman, Macon, "Coronary Thrombosis Diagnosis and Treatment." Dr. J. C. Patterson, Cuthbert, "Diverticulosis of the Sigmoid"; discussed by Dr. Gordon Chason, Bainbridge; Dr. G. Y. Massenburg, Macon; and Dr. Beecher DuVall, Atlanta. Dr. Theodore Toepel, Atlanta, "Arthritis"; discussed by Dr. F. G. Hodgson, Atlanta; Dr. I. W. Irvin, Albany; and Dr. Chas. C. Harrold, Macon. Dr. J. J. Clark, Atlanta, "Diagnosis of Diseases Affecting the Colon by X-Ray"; discussed by Dr. Allen H. Bunce and Dr. John B. Fitts, both of Atlanta. Dr. C. E. Boynton, Atlanta, discussed paper by Dr. C. C. McLean, Birmingham, entitled "The Age Incidence of Climatic Variations in the Manifestations of So-Called Rheumatic Fever in Children—Lantern Slides." Dr. Thomas Harrold, Macon, "Surgery and Radiation in the Treatment of Cancer of the Mouth"; discussed by Dr. Jack Jones and Dr. Lon Grove, both of Atlanta. Dr. Wm. A. Smith, Atlanta, "Encephalography"; discussed by Drs. N. M. Owensby, T. P. Goodwyn and E. F. Fincher, all of Atlanta. Dr. Hugh Cochran, Atlanta, "Injuries to the Brain"; discussed by Dr. Chas. C. Harrold, Macon; Dr. J. M. Barnett, Albany, and Dr. Frank K. Boland, Atlanta. Dr. Dan Y. Sage, Atlanta, "A Discussion of Necessary and Unnecessary Operations on the Female Pelvis"; discussed by Dr. W. L. Cooke, Columbus. Dr. C. W. Roberts, Atlanta, "Lesions of the Thyro-Glossal Tract"; discussed by Dr. C. E. Waits, Atlanta; Dr. C. H. Richardson, Macon, and Dr. I. W. Irvin, Albany. Dr. F. B. Blackmar, Columbus, "Foreign Bodies in the Eye"; discussed by Dr. Grady Clay, Atlanta. Dr. T. C. Davison, Atlanta, "The Goiter Problem"; discussed by Dr. C. H. Richardson, Macon, and Dr. C. E. Waits, Atlanta. Dr. L. G. Baggett, Atlanta, "Some Everyday Gynecological Problems." Dr. W. A. Selman, Atlanta, "Conservatism in Gallbladder Surgery"; discussed by Dr. Floyd McRae, Atlanta; Dr. B. T. Wise, Americus, and Dr. A. H. Hilsman, Albany. Members of the Board of Counsel are: Dr. Frank K. Boland, Atlanta, and Dr. Chas. H. Richardson, Macon. Chairman of the Program Committee: Dr. Marion T. Benson, Atlanta.

The Sixth District Medical Society met at Hotel Dempsey, Macon, June 28th. Titles of scientific papers on the program were as follows: "Cardiac Arrhythmias." Dr. Fred Webb, Macon; "Classification and Treatment of Diarrhea." Dr. R. C. Goolsby, Jr., Macon; "Amyotrophies and Myotrophies," Dr. S. T. R. Revell, Louisville; "Acute Pains in Muscles, Nerves and Joints." Dr. H. C. Atkinson, Macon; "Glaucoma." Dr. J. Allen Smith, Macon; "Reports of Cases." Dr. G. Y. Massenburg, Macon; "Some Aspects of Mental Hygiene in Children," Dr. Wm. H. Kiser, Jr., Atlanta, represented the Georgia Pediatric Society.

The New York State Department of Health in its News Letter of June 13, 1933, states that "Successful public health nursing, no matter by what agency it is conducted, must be developed under the leadership of the medical profession and in cooperation with all other community agencies." The National Organization for Public Health Nursing outlined a program for public health nursing as follows: "1. To assist in educating families and individuals to protect their own health. 2. To assist in the adjustment of family and social conditions that affect health. 3. To assist in correlating all health and social programs for the welfare of the family and community. 4. To assist in educating the community to develop adequate public health nursing facilities."

The Burke County Medical Society and the Jenkins County Medical Society held a joint meeting at Millen on June 1st. Dutch style dinner was served at 8:00 P. M. Dr. M. E. Perkins, Millen, president of the Jenkins County Medical Society, presided. Dr. C. Thompson, Millen, reported two cases, "Diabetes Insipidus" and "Pyelonephrosis with Multiple Calculi." A history over a period of years was given on the latter case and specimen removed at operation was shown. Dr. W. C. McCarver, Vidette, spoke on the "Diarrheas of Infancy and Childhood"; discussed by Doctors Daniel, Lee et al. Motion carried to invite the Screven County Medical Society to join in the next meeting of the societies. Dr. R. G. Brown, Garfield, was invited to join the Jenkins County Medical Society. Dr. Guy G. Lunsford, Millen, gave a report on his experiences in Jenkins county with typhoid carriers. Dr. C. Thompson, Millen, gave a plan for post-graduate study to be sponsored by the Association for all its members. All members present favored such a project and pledged themselves to take the study as it was outlined. Dr. R. L. Miller and Dr. C. Thompson gave reports on the Macon session of the Association.

The Board of Trustees of the American Medical Association has called the Annual Conference of Secretaries of Constituent State Medical Associations to be held at Chicago, Friday and Saturday, September 22-23, 1933.

The Randolph County Medical Society met at Cuthbert on July 6th. The program consisted of one Case Report by each member.

Dr. O. R. Thompson Macon, has established a Pre-Natal Clinic at the Utility Club's Clinic and Milk Station in South Macon. The clinic will be open every Friday afternoon. It was opened to relieve the congestion in the Pre-Natal Charity Clinic at the Macon Hospital.

Dr. J. A. Thrash, Columbus, has been elected Muscogee County Commissioner of Health.

The Spalding County Medical Society met at the Strickland and Son Memorial Hospital, Griffin, on June 19th.

Governor Eugene Talmadge announced the appointment of members of the State Board of Health on July 5th. The names by districts, state at large and dates of expirations of terms follow: First District, Dr. Cleveland Thompson, Millen, September 1, 1939; Second District, Dr. C. K. Sharp, Arlington, September 1, 1939; Third District, Mr. R. C. Ellis, Americus, September 1, 1936; Fourth District, Dr. Marvin M. Head, Zebulon, September 1, 1937; Fifth District, Mr. Robert F. Maddox, Atlanta, September 1, 1936; Sixth District, Dr. A. R. Rozar, Macon, September 1, 1938; Seventh District, Dr. M. M. McCord, Rome, September 1, 1938; Eighth District, Dr. Henry W. Clements, Adel, September 1, 1938; Ninth District, Dr. L. C. Allen, Hoschton, September 1, 1939; Tenth District, Dr. Wm. A. Mulherin, Augusta, September 1, 1937. For the state of Georgia at large from the Georgia Pharmaceutical Association: Dr. T. C. Marshall, Atlanta, and Dr. Claud Rountree, Thomasville, both terms expire September 1, 1935. For the state of Georgia at large from the Georgia Dental Association: Dr. M. H. Varn, Atlanta, and Dr. Robert F. Sullivan, Savannah, both terms expire on September 1, 1934.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on July 6th. Dr. Samuel J. Sinkoe, Atlanta, gave a case report entitled "Treatment of Chancroids with the Elastic Plaster Bandage." Dr. H. R. Donaldson, Atlanta, gave a clinical talk "Vaccine Therapy Treatment of Typhoid Fever." Dr. W. W. Young, Atlanta, read a paper entitled "Recent Advances in Psychiatric Education." The discussions were led by Dr. R. H. Oppenheimer, Dr. Will Roberts and Dr. W. H. Kiser, Jr., all of Atlanta.

A meeting of the Georgia Hospital Association was held at the Francis Virginia Tea Room, Atlanta, on June 29th, at 6:00 P. M. The members were dinner guests of the members of the Association of Grady Hospital. Miss Feebeck, president, presided. The Secretary gave a financial statement of the Asso-

ciation. Officers elected were: President—Mr. Robert Hudgens, Emory University; First Vice-President—Miss Jessie M. Candlish, Superintendent of the Egles-ton Memorial Hospital, Atlanta; Second Vice-President—Miss Theresa Younger, Superintendent, Scottish Rite Hospital, Decatur; Trustee—Miss Annie Bess Feebeck, Superintendent of Nurses at Grady Hospital, Atlanta; Treasurer—Mr. Geo. R. Burt, Piedmont Hospital, Atlanta. Report by Auditing Committee that all accounts of the Treasurer were found to be correct and all funds properly accounted for. Motion carried to defray the expenses of Mr. Geo. R. Burt to attend the convention of the American Hospital Association at Milwaukee in September as a representative from the Georgia Hospital Association. The management of the Piedmont Hospital, Atlanta, invited the Association to meet there in October.

The Cobb County Medical Society met at the Marietta Hospital, Marietta, on July 5th. Dinner was served to all members and guests. Dr. Frank K. Boland, Atlanta, read a paper entitled "Surgical Treatment of Pulmonary Tuberculosis"; Dr. Stephen T. Barnett, Atlanta, "Irritability." Other guests were doctors from Cherokee and Barrow counties.

Dr. Joseph Yampolsky, Atlanta, President of the Georgia Pediatric Society, announces that the first scientific meeting of the Society will be held at the Academy of Medicine, 38 Prescott Street, N. E., Atlanta, Thursday, October 12th.

The Ware County Medical Society met at the A. C. L. Hospital, Waycross, on June 12th. Dr. A. W. DeLoach, Waycross, read a paper entitled "Acute Abdominal Pain". Dr. T. J. Ferrell, Waycross, entertained the members to supper in the dining room of the hospital.

Dr. A. H. Hilsman, Albany, was elected President of the Chattahoochee Valley Medical and Surgical Association on July 12th. Dr. W. J. Love, Opelika, Ala., was re-elected Secretary-Treasurer. Radium Springs has been designated as a permanent place for the Association's annual meetings.

The Fifth District Medical Society will hold its fall meeting at the Academy of Medicine, Atlanta, Thursday, October 5th.

Dr. Wm. R. Houston, Augusta, has been elected Chairman of the Richmond County Board of Health.

Dr. J. A. Shields, LaFayette, announces the election of Dr. O. B. Murray of Miami, Florida, as Health Commissioner for the unit composed of Catoo-sa, Dade and Walker counties.

Dr. Maude E. Foster, Atlanta, was the principal speaker at a meeting of the Atlanta Business and Professional Women's Club at the Robert Burns Cottage

on July 12th. Dr. Foster spoke on "Health" and emphasized the importance of periodic medical examinations.

Dr. Oliver Artega announces the opening of an office at 1001 Atlanta National Bank Building, Atlanta. His practice will be limited to diseases of the eye, ear, nose and throat.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on July 20th. Dr. J. D. Martin, Jr., Atlanta, gave a case report entitled "Reconstruction of Lower Lip"; Dr. Richard B. Wilson, Atlanta, clinical talk, "Air Encephalography and Diseases of the Nervous System"; Dr. Wm. W. Anderson, Atlanta, paper, "Anemias in Infancy". The discussions were led by Dr. Roy R. Kracke, Emory University; Dr. Roger W. Dickson and Dr. Vernon E. Powell, Atlanta.

The Thomas County Medical Society met at the John D. Archbold Memorial Hospital, Thomasville, on June 16th. Dr. Rudolph Bell, Thomasville, read a paper entitled "Rupture of the Uterus During Labor"; Dr. Harry Ainsworth, Thomasville, "Headache from Medical Aspect"; Dr. J. T. King, Thomasville, "Headache Due to Diseases of the Eye, Ear, Nose and Throat." The papers were discussed by Dr. Ernest F. Wahl and Dr. H. M. Moore, Thomasville. Dinner was served at the hospital to members and their wives.

Dr. Thos. R. Aycok, Monroe, will be at The Tulane University of Louisiana, Graduate School of Medicine, New Orleans, for several weeks taking post-graduate study.

AUTOMOBILE INSURANCE* MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA

Office of the Secretary-Treasurer

Southern Pines, N. C.,
January 15, 1932.

To the Fellows of the Medical Society of the State of North Carolina:

At a meeting of the Executive Committee at Greensboro, Saturday, January 9th, several different forms of insurance were studied with a view to saving the Fellows of the Society money on premiums paid. Among others was automobile insurance and the Executive Committee by motion approved the State Farm Mutual Automobile Insurance Company for automobile insurance for our members. Immediately after the meeting the President and Secretary took out a policy in this company.

We have investigated this company and it seems to be perfectly sound from every standpoint.

We are enclosing you herewith, two leaflets which will give you some information in regard to it if you care to follow it up further. We are also enclosing you a postcard addressed to Mr. M. M. Stewart, special agent for North Carolina, Raleigh.

N. C., that does not require postage. On the opposite side you will find certain facts which you can easily fill in that will enable the company to give you the price of whatever kind of insurance you want on your car and an agent of the company will call on you.

According to figures submitted, you will find this company will save you from 40 to 50 per cent of the premium you have been having to pay.

You will remember that an endeavor was made to get the law in regard to group insurance so changed that our Society would be able to secure group insurance of all the various kinds. On account of the opposition of the State Insurance Commissioner and Insurance men who were in the legislature and on the outside of the legislature we were unable to do so. This is our answer to that action.

Only doctors in good standing are eligible to this insurance. Present your 1932 membership card when the agent calls.

You may rest assured that the Executive Committee takes great pleasure in passing on to you the large saving arranged through this company.

Very truly yours,

L. R. MCBRAYER, M.D.

Secretary-Treasurer.

*The Medical Association of Georgia can supply its members with the same form of protecting policies as those sold to the members of the Medical Society of the State of North Carolina. If interested in any form of automobile insurance, write the office of the Association. When the policy you now have expires or comes up for renewal; it will be to your interest to have a policy written through the office of the Association, 139 Forrest Avenue, N.E., Atlanta.

BOOKS RECEIVED

Urine and Urinalysis, by Louis Gershenfeld, Ph.M., B. Sc., P. D., Professor of Bacteriology and Hygiene and Director of the Bacteriological and Clinical Chemistry Laboratories at the Philadelphia College of Pharmacy and Science. Contains 272 pages, illustrated with engravings. Publishers: Lea & Febiger, Philadelphia, Pa. Price \$2.75.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Pharyngology, Hygiene, and other topics of interest. By leading members of the medical profession throughout the world. Edited by Louis Hamman, M.D., Visiting Physician, Johns Hopkins Hospital, Baltimore, Md. With the collaboration of F. G. Blake, M.D.; V. C. David, M.D.; Dean Lewis, M.D.; J. W. McNee, M.D.; J. H. Musser, M.D.; W. W. Palmer, M.D.; A. L. Bloomfield, M.D.; C. P. Howard, M.D.; W. M. Marriott, M.D.; G. R. Minot, M.D.; C. C. Norris, M.D.; E. Rehn, M.D., and

W. M. Wilder. Volume II. Forty-Third Series, 1933. Contains 314 pages. Publishers: J. B. Lippincott Company, East Washington Square, Philadelphia, Pa.

Diet In Sinus Infections and Colds, by Egon V. Ullmann, M.D., Formerly Special Lecturer for Biology at the Oregon State College; Instructor at the First Medical Clinic at the University of Vienna, Demonstrator at the Laryngological Clinic (Prof. Hajek) at the University of Vienna, Assistant Physician at the Otolaryngological Clinic (Prof. Neumann) at the University of Vienna, Member of the Research Staff of the State Serum Institute of Austria. *Recipes and Menus* by Elza Mez. Contains 166 pages. Publishers: The Macmillan Company, 60 Fifth Avenue, New York City.

Medical State Board Examinations—Topical Summaries and Answers. An Organized Review of Actual Questions Given in Medical Licensing Examinations Throughout the United States. By Harold Rypins, M.D., Secretary, New York State Board of Medical Examiners; Associate in Medicine, Albany Medical College; Former President, Federation of State Boards of Medical Examiners of the United States; Former Instructor in Medicine, University of Minnesota. Contains 448 pages. Publishers: J. B. Lippincott Company, Philadelphia, Pa.

A Text-Book of Neuropathology, by Arthur Weil, M.D., Associate Professor of Neuropathology, Northwestern University Medical School, Chicago, Ill. Contains 335 pages. Illustrated with 260 engravings. Publishers: Lea & Febiger, Washington Square, Philadelphia, Pa.

The Medical Clinics of North America. (Issued serially, one number every other month). Volume 16, No. 6. (Mayo Clinic Number—May, 1933). Index Number. Octavo of 239 pages with 28 illustrations. Per Clinic Year, July, 1932, to May, 1933. Paper, \$12.00; Cloth, \$16.00 net. Publishers: W. B. Saunders Company, West Washington Square, Philadelphia, Pa.

MERCK'S EXHIBIT

According to figures just completed, over eight thousand persons viewed in a single day the Merck exhibit at the Chicago Fair. The popularity of the chemical display is an indication of the growing interest of the public in scientific matters.

Located on the ground floor of the Hall of Science, the exhibit of Merck & Company, Inc., depicts the progress made in chemistry during the past century. It is situated between the chemical group in which the display of Union Carbide & Chemical Company is outstanding and the purely medical group.

Attracting most attention in the Merck exhibit is the Nososcope—a stereopticon through which can be seen something of the history and progress of diseases. It briefly depicts the constant battle being waged by

science against disease. By actual count, ninety-nine persons used the Nososcope in ten minutes.

A Pharmacy Desk, with a professional pharmacist in attendance is likewise attracting considerable attention. In the presence of the onlookers the pharmacist demonstrates the art of his profession in the preparation of pills, the weighing of very small quantities of powders, the filling of capsules and the preparation of other types of pharmaceutical products required in prescriptions.

Nine foot prisms of plate glass, which typify the mass of chemicals that are used today in science and industry, form a part of the outside wall of the exhibit. Selected for their brilliance and color they attract considerable attention.

The Diorama of the Merck plant, a three dimensional picture in which the foreground is in modelled perspective,—faithfully represents the extensive works, offices and laboratories at Rahway, New Jersey.

Lighting experts carry out the suggestions of daylight to dusk and the plant as night follows day.

Adjacent to the Diorama are cut-out pictures of an ancient pharmacy of the 17th Century and the old factory of the Powers & Weightman Company, built in the early 1850's at the East Falls of the Schuylkill near Philadelphia.

These three representations illustrate the marked advance in the buildings and equipment of chemical plants in the last hundred or two years.

Along the west wall stands a museum case containing interesting relics of 250 years of pharmacy and chemistry in the service of Merck & Company, Inc., and their predecessors.

Flanking the museum case are to the north displayed a part of the group of rare alkaloids.

COMMUNICATIONS

Cancer Cures and Treatments

To the Editor:

I am enclosing with this letter a copy of a new edition (June, 1933) of the pamphlet on "Cancer Cures and Treatments" prepared and issued by the Bureau of Investigation. While these pamphlets are sold at a nominal price (15 cents), they do not have nearly as large a circulation as their importance warrants.

The pamphlet deals with thirty-nine "cures" or "treatments" exploited from fifteen different states. Some of these, while widely advertised in their time, are out of existence; others are still being exploited. The "treatments" themselves, as is brought out in the foreword to the pamphlet, range all the way from palpable frauds, through those whose methods seem to smack more of commercialism than of science, to others that may be said to represent the optimistic claims of misguided enthusiasts. As the foreword also emphasizes, it is to be borne in mind that a person with cancer will die just as surely by relying on an honest but misguided enthusiast as by sub-

mitting to the malpractice of the most blatant of cancer-cure swindlers.

Possibly, after looking over the pamphlet, you may feel warranted in calling the attention of your readers to it, either editorially or in the department of your journal devoted to reviews.

ARTHUR J. CRAMP, M.D., *Director,*
Bureau of Investigation, A. M. A.

Chicago, Ill., June 27, 1933.

MOTION PICTURES

To the Editor:

We were very much gratified by the interest shown in our motion pictures by physicians who attended the A. M. A. Session last week.

However, you may not realize that it was physically possible for us to show only a few of our films. We now have about 45 films on a wide variety of pediatric, obstetrical, surgical and laboratory subjects, and we hope constantly to increase this number.

Did you know that we have a lending library of these 16 mm. films, that you can borrow them for showing before your medical society, hospital staff or medical students?

We will be glad to cooperate with you to the best of our ability, without obligating you in any way.

MEAD JOHNSON & COMPANY

Evansville, Indiana, June 24, 1933.

PROSE WORKS OF DR. FRANCIS ORRAY TICKNOR

To the Editor:

I am making a collection of the prose works of the poet, Dr. Francis Oray Ticknor who wrote and practiced during the years 1845 to 1870.

I am inclined to believe that he left some articles on medical science, but have not been able to locate them. Has your association any records which might give me information on this matter, or any other facts concerning his life?

I should greatly appreciate anything you can tell me regarding him.

EUGENE D. HESS

Alabama Polytechnic Institute.

Auburn, Alabama, June 26, 1933.

ACCEPTED ARTICLES

To the Editor:

In addition to the articles enumerated in our letter of May 27 the following have been accepted:

Abbott Laboratories:

Sterile Ampoules of Procaine Hydrochloride Crystals (Abbott) 100 mg.

Sterile Ampoules of Procaine Hydrochloride Crystals (Abbott) 120 mg.

Sterile Ampoules of Procaine Hydrochloride Crystals (Abbott) 150 mg.

Sterile Ampoules of Procaine Hydrochloride Crystals (Abbott) 200 mg.

Lederle Laboratories, Inc.:

Refined and Concentrated Antipneumococcic Serum
Type II (Lederle).

Eli Lilly & Co.:

Extralín—Pulvules Extralin. 0.5 Gm.

PAUL NICHOLAS LEECH, *Secretary,*
Council on Pharmacy and Chemistry,
American Medical Association.

Chicago, Ill., June 30, 1933.

TRUTH ABOUT MEDICINES

New and Nonofficial Remedies

The following products have been accepted by the Council on Pharmacy and Chemistry of the A. M. A., for inclusion in New and Nonofficial Remedies

Calcium Gluconate-Merck.—A brand of calcium gluconate—N.N.R. (New and Nonofficial Remedies, 1933, p. 129). Merck & Co., Inc., Rahway, N. J.

Phenobarbital Sodium-Merck.—A brand of phenobarbital sodium—N.N.R. (New and Nonofficial Remedies, 1933, p. 96). Merck & Co., Inc., Rahway, N. J.

COMMERCIAL EXHIBIT

Macon Session

THE MAX WOCHER & SON COMPANY
Cincinnati, Ohio

In 1837, Max Wocher, after serving an apprenticeship under the celebrated Parisian instrument maker, H. Luer, migrated to the United States. Traveling westward by boat, horseback, and sometimes on foot (for there were no railroads) he finally reached his destination—Cincinnati—then the metropolis of the West—and established the first surgical instrument house in that part of the country.

A single, small room with meager equipment, furnished to turn out a few instruments a day, was the nucleus around which was formed the present great organization, THE MAX WOCHER & SON COMPANY.

The business requires for its accommodation three separate buildings—one a nine-story office and display building; another a five-story factory; and the third, warehouses with facilities for the storage of a large working stock.

The extent of the business at the present time is not confined merely to domestic trade, but is carried throughout the entire world, with branch offices established in many of the principal cities of both this and foreign countries.

It is the boast of the officers of the company that there is not a more complete stock of surgical instruments and supplies in the entire world. There may be larger quantities of single items but not a greater variety.

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DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

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Number 8

HOW DOES MEDICINE ADVANCE?*

C. R. STOCKARD, M.D.

Cornell University Medical College

New York City

It is a great pleasure for me to be here on several accounts: In the first place I feel at home, since I started out in this world from your sister State, Mississippi. Yet I have even more reason for feeling at home than this—I am a great grandson of the State of Georgia as my paternal grandmother was born in Lexington, Georgia. I am further happy to be paying an obligation, since I was invited some years ago to deliver this commencement address and was unable to accept. This time I was able to accept and am delighted to be here.

I am addressing in particular persons about to become Doctors of Medicine. The most important theme to them should be: How does medicine advance? And, next in importance: Do young persons or beginners help in this advance?

In discussing this advance in particular we are considering the problem of advance in human activity in general. The world has advanced; this fact is easily established by looking back 100 years to 1833, when there was no electric light, no telephone, poor railroads, poorer steamboats, almost no sanitation, no knowledge of infections, no anaesthetics, and the lack of many other now necessary things. Yet turning back only to 1900—33 years ago—there was almost no knowledge of food essentials; the frightful deficiency diseases of pellagra and beri-beri were dark riddles—vitamins had not been discovered; only a bit was known of the action of the internal secretions. The x-ray was just coming into use, being discovered in 1895; radium was on the threshold of discovery; the facts and mechanism of animal inheritance had not been analyzed; automobiles were rare curiosities, and there were no roads which were comfortably passable

in winter—no flying machines, and neither the North nor the South Pole of the earth had been reached by man. These are only some of the big outstanding things that have been accomplished in the last 30 years, but hundreds of others could be listed to show how active and ingenious a few men have been in advancing the knowledge and control of our physical surroundings. The great mass of people, high and low, rich and poor, have played no part in this—most of them scarcely realizing the changing scene.

Why is it that so few people do notable things, and what kind of persons are those that do? Only one man has flown over both the North and South Pole and very few others have flown over either. Only one Roentgen discovered the x-ray and very few men developed its enormous uses and importance. The general population or even the general group educated in a subject, such as physics or medicine, do not take part in advancing the knowledge of the subject. Only the few—Who are they? And more important, can any person be one of them? I contend that these ingenious few are generally young, not overtrained, sometimes not formally educated, but always observant and thoughtful persons. Careful observation is the mainspring of all discovery and discreet imagination is the mechanism it must put into motion.

Observation and experiment are the only two methods to be used by the constructive mind in making discovery. Keen observation comes from wide-awake interest and alert special senses. Education may stimulate and improve observation but it may and often does completely dull it.

The young savage, untamed and untutored, who discovered lodestone or magnetic attraction made one of the most fundamental discoveries in physics, yet he was probably naked and certainly uneducated. The Peruvian Indian who discovered that the bitter waters cured malaria, and he or his confrere who discovered that cinchona bark was the stuff that caused the bitterness, contributed one of the few medicinal specifics for curing human disease. These Indians were simply careful observers with sufficient imagination

*Doctorate address at commencement exercises, University of Georgia Medical Department, Augusta, Ga., June 5, 1933.

to appreciate the meaning of their observation. The discovery of cinchona bark or quinine has saved thousands of lives and made habitation possible in places otherwise deadly. All of the educated physicians of Europe in more than a thousand years before 1900 had only discovered one other medicinal specific cure for disease, if we may so class the use of mercury against syphilis.

The pioneers and many great discoverers are unknown, and probably many of the greatest, such as the discoverer of quinine as a cure for malaria, had no name any more than the disease he cured had! No Nobel prize has been given for a more important discovery in medicine.

The Indian medicine men and the old women healers have given to the pharmacopoeia most of our useful drugs, such as digitalis, nuxvomica, ergot, caffeine, nicotine, etc. Foods and medicinal herbs have been discovered by man in much the same way as other animals have discovered their food!

The savage who drove a peg to hold two poles together instead of tying them with a vine, opened the way for building with nails and screws, and gave one of the most important simple implements to architectural construction. If buildings were bound together instead of fastened with pegs, nails and screws, a strange array it would be.

Cave houses, wooden architecture, pottery vessels, floating logs, canoes, sails, poison arrows, lodestone, magnetism, and quinine, among hundreds of other things, have been handed to us by our disrespected savage ancestors.

Photography, ether anaesthesia, the x-ray, and other things, have been accidentally discovered although under more civilized conditions. The state of Georgia is justly proud of Dr. Crawford Long, the original discoverer of ether anaesthesia. No less credit for this brilliant discovery is due Doctor Long on account of the accidental way in which it was discovered. He found that persons enjoying an ether jag were insensible to physical pain. The full meaning of this accidental discovery was demonstrated by Doctor Long through the experimental method.

The final step in Roentgen's discovery of the x-ray was probably accidental. Exposed photographic plates were lying under books in which a large key had been placed as a marker. On leaving his laboratory Roentgen by chance placed the glowing tube with which he had been working on top of these books. To his surprise a day later when the photographic plates were developed the shadow of a key covered each picture. After wondering how this could have happened he

finally decided to replace the accidental set-up as nearly as could be remembered except that unexposed plates were placed beneath the books with the key between the pages. The tube was again placed on top and left over night. Again the developed plates showed the shadow of the key! Roentgen now realized that rays from the tube passed freely through the books to the plates and that the iron key was not transparent to these rays and, therefore, produced the shadow. The strange new x-ray was thus accidentally caught, and it opened the possibility for the discovery of radium and the other powerful rays of modern physics.

In the light of this review—it is expected that experience and age are necessary for discovery of even complex processes? Darwin was a young man just out of college when on the voyage of the *Beagle* he was impressed with natural selection as a factor in the evolution of species. Huxley was the young naturalist on the *Rattlesnake* in the South Seas when the gastrea theory of animal development was conceived, and this was his most brilliant contribution. Jenner was a boy in a doctor's office when he learned about the relation of smallpox to cowpox from the milk maids. He had not studied medicine at that time but he later invented vaccination from what he learned as a boy. Caspar Fredric Wolff is a striking example of youth in discovery since his discovery involved a complex subject which the most learned professors had long studied and debated. Preformation and epigenesis were the two current theories of animal development. Wolff proved epigenesis to be a fact and further discovered the embryonic kidney now called for him the Wolffian body and the Wolffian duct, etc., and he actually laid the foundation for the modern understanding of animal embryology in 1759, one hundred years before Darwin published the *Origin of Species*. Wolff's contribution was one of the greatest in biology yet at the time he was only a young candidate for the M.D. degree at the University of Berlin.

Balfour published his embryology of the elasmobranch fishes as one of the classical works on animal development of the last century and was later killed in the Alps when still only 30 years old. Much more recently—a little more than 10 years ago—Banting, a young medical graduate working with Best and Collip, two other young men, together extracted the active principle of the pancreatic islands and secured insulin, the organo-therapeutic agent for the control of diabetes.

So it has always been, and still is, possible for the young and inexperienced to make

fundamental discoveries in science but *only* when they are keenly aware of the meaning of an accurate observation. Youthful curiosity promotes observation and wondering imagination. The older and experienced scientist only contributes discoveries provided he retains youthful or boyish curiosity and wonder. Then his observations are sharpened by experience and his imagination and deductions are seasoned with a wider knowledge. This gives the mature workers so great an advantage that most people credit only them with making discoveries. Yet another fact of prime interest is that these successful seasoned investigators will almost invariably be found to have been discoverers during their youth.

Thus you young persons just receiving the Degree in Medicine are primed for the fray and if you postpone performance there is slim prospect of developing it during a later stage. Be careful and thoughtful observers of simple things—nothing is so small or so simple that it does not warrant your attention, and in thinking of the simplest occurrences we often find a way to understand what had seemed to be the most complex.

Is this road to discovery and ready aid in medical advance easily accessible to the young physician? In order to answer this, we must briefly consider what kind of an undertaking the young doctor is actually entering into. The demands to be made upon you as a physician in a community are actually such as you may not have thought of and have certainly not realized nor been educated for.

In medical school the student studies the sciences and principles underlying the control and treatment of disease. You are taught and shown how to treat sick patients. And the student after four years of such teaching and study comes to think that this is what he shall do in practice. The *business, social, political* and *diplomatic* phases of his life have scarcely been hinted at, and are certainly not presented as large elements for his existence and economic welfare.

Suddenly the young medical graduate becomes planted in a community and "Doctor Brown" puts out his shingle to practice as he thought it in medical school. Then what happens? He finds that the practice of medicine is not one simple activity—treating the sick, but consists of *three* very different kinds of activities:

First—There is the treating of the sick patient which he was taught about in the medical school; second—There is an important business problem for living and maintaining himself in the community. He must associate with the upper group of so-

ciety and to do this must live in an expensive neighborhood and a good house. He must maintain an office in which to receive and treat patients and now-a-days must have an automobile as a means of conveyance to visit his patients. The expense of all this is to be met by collecting a proper fee from the patients he treats. But he has never been taught or advised how much or how little to charge, or whether to collect cash from everyone or to render an account or bill for his services—or how and when to send this bill. If he charges too much the patient thinks he could have had the services of an older and more experienced physician for such a fee and does not come back. If he charges too little the patient thinks this is because he is a poor doctor and not worth the price.

These and many other routine business questions are ever before the young physician attempting to pay the expenses of his professional life in the community. This is just as truly and just as large a business problem as any merchant or farmer has to understand. Third—There is a political and diplomatic phase of far-reaching importance to be mastered by the successful physician. In simple words he must get on with the people of the community, and certainly with other physicians of the region. The business side like all business is competitive; he hopes to have a full share of the community practice. But he must be careful and most diplomatic in the methods by which he wins a patient who had formerly gone to another doctor. He must be most politic in dealing with other doctors whose advice he seeks in consultation about the illness of a patient. He may make of himself an influential and valuable citizen for improvement of the health-condition of the community but if this is not done in a proper political way he may condemn himself before large groups of the people.

No one can exert more influence in the public life of the community than the medically trained man is able to assume. The community is a great psychological field infested with prejudice, deceit, uncertainty, and fear! Meddling in other peoples' business is one of the chief activities not only on main street but spreading into finally international meddling such as into the internal affairs of the people of Germany. Nothing gives more trouble in the world than not attending to one's own business. The doctor must be careful of his public activity but he is unusually equipped as a judge of moral questions since most of these are in truth biological and not mythical.

Hypocrisy and lying, and not murder and theft, are the greatest sins of man against

nature, and wild men and lower animals rarely stoop to deceit and lying. "Who steals my purse steals trash," but lying renders one unable to comprehend his actual surroundings.

How is the young physician to acquire suddenly the knowledge of politics and diplomacy necessary to steer his course straight for popularity and general confidence? Only by a keen sense of human understanding and a high regard for proper proportions. A sense of humor or, better, a sense of proportion is a most valuable asset for any ambitious person.

We have gone far enough to show that the life of the physician spreads much beyond his primary knowledge of medicine. And the sad fact quickly presents itself that the most capable physician in the treatment of disease may not always be the most successful nor the most eminent doctor in the community.

A shrewd politician may be very successful in medicine, and a capable diplomat in dealing with the medical profession at large may become an eminent physician in the state or country on account of the honors his colleagues may confer upon him. These two facts are the great handicaps to the advance of medical science and practice. They divert the attention and energies of persons who should have nothing to concern themselves or their attention other than an understanding of human disease and the devising of ways and means of combating it. Only a few are true enough to see the one path, and these are the few who make medicine advance!

May the staff of Aesculapius and the oath of Hippocrates guide you!

THE PLACE OF THE CLINIC IN MEDICAL PRACTICE: PRESIDENT'S ADDRESS

DEAN LEWIS, Baltimore (*Journal A. M. A.*, June 17, 1933), states that it is difficult to determine when medical and surgical patients were first separated from each other and distinct medical and surgical clinics formed. When the specific causes of a number of diseases were made known, medicine was revolutionized. Before the advent of our modern knowledge of infection, communicable diseases devastated mankind. Nevertheless it was from such an atmosphere as this that modern medicine evolved, from a medicine that fought disease with magic and superstition to the great clinics and schools of medicine of today. A clinic in its organization often reflects to a great degree the political or governmental genius of a people. The author also discusses the interdependence of the clinic and the laboratory, the clinical sense, the clinical instruction and controlled experimentation, the overproduction of physicians and the foundation of efficient medical service.

CONGESTIVE HEART FAILURE*

S. T. R. REVELL, M.D.
Louisville

To Gaskell¹, the physiologist, we are indebted for the myogenic doctrine, and to Sir James McKenzie², we are under lasting obligation for his clinical experience, diagnostic skill and mental acumen, which enabled him to see the wisdom contained in the myogenic theory, especially with regard to its causal relationship to heart failure.

The theory of the "myogenic doctrine" rests on these five inherent properties of each heart muscle cell, namely: stimulus production, excitability, contractibility, conductivity, and tonicity.

From the anlage of the heart, early in embryonic life, there is formed a tube like structure, which is known as the primitive cardiac tube. During the process of growth, this tube curves on itself to form a figure which resembles the letter S. From these curves or pouches, the auricles and ventricles are formed.

Keith and Flack³ have described a group of cells in the sulcus terminalis, which is situated at the junction of the orifice of the superior vena cava with the right auricular appendix and to which has been given the name, sino auricular node or pace maker. The cells comprising this node "consist of fine, pale, delicate fibers, in which branches of the sympathetic and pneumogastric terminate." The normal heart beats originate in the cells of this node and are conducted to the ventricles by way of the auricular ventricular bundle.

The very essence of the function of the primitive cardiac tube is, of necessity, connected with heart failure, especially those types which are associated with the arrhythmias, i.e. auricular fibrillation.

The circulation serves the purpose of supplying the body with nutritive material and removing the waste products that enter the blood stream. As a constant pressure is necessary to force the blood onward, and the initial impetus given to the circulation by the contraction of the ventricles is in-

*Read before the Medical Association of Georgia, Macon, Ga., May 10, 1933.

errupted, the factors of elasticity of the arteries and resistance of the arterioles and capillaries, are essential for the maintenance of a constant flow. As the heart is the great central pump in this system, it necessarily follows that any impairment in the functioning of any part of the entire system, entails upon the heart increased effort. So long, however, as the heart is able to meet the demands made upon it, no abnormal symptoms are manifested, but, once its capacity is exceeded, signs of distress appear. Normally, the heart possesses the power of maintaining an adequate circulation, both when the body is at rest and when subjected to the stress and strain of life; hence, it may be said to possess a resting force and a reserve force. When the latter fails, evidences of heart failure appear. Congestive heart failure may be defined as a condition in which the action of the heart is inadequate to meet the normal demands of everyday life and with this failing mechanism there is always associated an engorgement of the venous circulation, either systemic or pulmonary.

The Causes of Congestive Heart Failure—The causes of congestive heart failure may be either functional or organic. As to which of these classifications arterial hypertension rightly belongs may be debatable, but as to its significance in the causation of heart failure there can be no doubt. Harrison, Ashman and Larson⁴ adduced rather conclusive proofs that there is a direct proportion between length of diastole and fiber thickness and an inverse ratio between pulse rate and fiber thickness. From their studies of the hearts of animals they have concluded that the optimum rate for patients is about 10, instead of 45, the figure arrived at from the studies of human hearts. Normal subjects with thickened fibers have slow rates and those with thin fibers have fast rates.

Persons with enlarged hearts have rates much faster than would seem optimal for such thick fibers. These observations seem to warrant the inference that cardiac exhaustion is in a large measure affected by the ventricular rate which is always faster in congestive heart failure, with its attendant thickening of the individual fibers, than is optimal. There is no single factor so likely to cause an increase in the diameter of the heart muscle cells as the constant overload produced by arterial hypertension.

Among the functional causes of congestive heart failure the following are mentioned:

excessive fatigue and exhaustion, cold and heat, thyroid disorders, intoxications, infections, high altitudes, emotions and arrhythmias.

Organic Causes of Heart Failure—The organic causes of congestive heart failure are fatty infiltration, fatty degeneration, and myocardial lesions, with or without valvular changes.

Fatty Infiltration—The areas of predilection for the normal deposits of fat are the regions of the coronary vessels, the interventricular groove, and those areas adjacent to the great vessels at the base of the heart. In pathological conditions it extends beyond these areas into the myocardium. Fatty deposits accumulate beneath the visceral pericardium and the heart then appears surrounded with fat. In the incised heart the muscle fibers are seen to be spread apart by the invasion of fat and as a result of the compression the fibers are atrophied.

Fatty Degeneration—In cases of fatty degeneration there is not only an invasion of the myocardium with fat, but there is an actual replacement of the muscle fibers by fatty droplets. Despite the apparent gravity of such a condition, heart failure rarely results from fatty degeneration except in cases of thrombotic infarction, acute yellow atrophy, phosphorus and arsenic poisonings.

Myocardial Lesions—These are of three kinds: vascular, interstitial and paranchymatous. The vascular lesions are most frequently associated with syphilis. The interstitial lesions may be acute or chronic and it has been suggested that they may be secondary to degeneration of the muscle fibers. Paranchymatous lesions are characterized by variation in the size of the individual fibers and appearance of the pigment in the nuclei of the muscle fibers.

Practically all cases of congestive heart failure are due to one or more of the above lesions, but the signs and symptoms resulting in any given case will quite naturally depend upon the part involved and the kind and extent of the lesion. Emphasis should be laid on the fact that valvular lesions are not essential in the causation of this disease.

The clinical pictures of the various syndromes of congestive heart failure present a rather composite symptomatology. Hamilton⁷ states that the physical signs by which we can recognize congestive heart failure depend upon venous congestion from failure of the heart to pump away blood as fast as it receives it, consequently there is an engorgement of the pulmonary veins with its attendant diminished vital capacity resulting in orthopnea, rales, cough, and at times hemoptysis. The systemic circulation then becomes

involved, the liver enlarges, the veins of the neck become engorged, and edema may or may not develop. Lewis⁹ mentions venous engorgement as one of the earliest signs of congestive heart failure and describes in detail the procedure by which its existence can be determined.

Harrison et al⁹ in their experiments on the "Measurement of Ventilation as a Test of Cardiac Insufficiency" reached the following conclusions: Dyspnea is directly (but only roughly) proportional to the ventilation per square meter of body surface. Dyspnea is inversely proportional to vital capacity. The ventilation index is slightly above normal in patients with early cardiac disease and much above normal in patients with congestive heart disease. Kerr¹⁰ rather succinctly describes the early symptoms thus: "Dyspnea with severe exertion, slight cough toward the end of the day, varying degrees of precordial and substernal pain, enlargement of the liver, congestion of the stomach, faintness, palpitation, and giddiness".

Failure of the Left Heart—Failure of the left heart results from a variety of causes, but they all have the common factor of imposing an extra burden on the left ventricle, as in cases of hypertension, extensive atheromatous changes in the aorta, adhesions of the pericardium, and violent physical exertion.

The premonitory symptoms of left heart failure are often slight, such as easy fatigue, palpitation, tachycardia, and an occasional extra systole. As the condition progresses, pain in the upper part of the chest develops, which at first is felt as a sense of constriction, often at the junction of the manubrium with the gladiolus. Exertion causes dyspnea and this is followed by a retrosternal pain which radiates to the shoulders, back and arms. A minor respiratory affection is often the last straw to an already overburdened heart. In these cases the cough is harassing, unduly prolonged, and the expectoration is streaked or stained with blood. Gallop rhythm and tachycardia indicate that the ventricular hypertrophy has given way to dilatation. The combination of tachycardia, extra systolic arrhythmia, and gallop rhythm are pathognomonic of a moderately advanced left heart failure. The point of maximum cardiac impulse is almost invariably outside of the mid-clavicular line and frequently to the anterior axillary line in the sixth intercostal space. The arterial pressure is practically always above normal. The duration of this stage is variable and often is followed by cardiac asthma, angina pectoris of decubitus, or pulmonary edema.

(a) Cardiac asthma occurs most frequently in the late evening or after several hours

of quiet sleep. It begins with a feeling of respiratory distress; dyspnea rapidly develops and this causes the victim to sit up in, or get out of bed and sit in a chair. Tachycardia is pronounced and both phases of respiration are involved. It lasts from a few minutes to a few hours but like true asthma, it disappears during the day only to return the next night or at some future time.

(b) Angina pectoris of decubitus begins about the same hour as cardiac asthma, but its onset is more sudden and its fastigium is reached in a few minutes. It consists of an intense post sternal pain which at times is also precordial. The pain is a peculiar constricting one, producing a sensation as though the chest were being squeezed in a vise. It often radiates to the shoulders and down the left arm, and to the back between the scapulae. The face is cold and covered with sweat. A fatal syncope frequently closes the scene.

(c) Pulmonary edema begins with a sense of fullness or constriction in the chest, soon followed by an incessant cough, which is at first productive of foamy, frothy sputum, which soon becomes a salmon, pinkish, bloody liquid. On physical examination, fine moist rales are heard at the lung bases. As the course of the malady progresses the rales become coarser, finally becoming bubbling or gurgling in character and are heard from the bases to the apices. Death in these cases is due to asphyxia.

Failure of the Right Heart—Failure of the right heart is more insidious in its development. Three forms are recognized: the acute, the sub-acute and the progressive.

(a) The acute form is usually associated with mitral stenosis, and often follows undue exertion. It is characterized by extreme apprehension, cyanosis, distention of the jugulars and a rapid enlargement of the liver, together with cough and expectoration, which is at first mucopurulent and later streaked with blood. The pulse is rapid and the arterial tension is low.

The transverse diameter of the heart is increased. On auscultation moist rales may be heard, their extent and quality closely coinciding with the progress of the symptoms.

(b) The sub-acute differs in no material manner from the acute form, save in its etiology. Like the latter, it is associated with mitral stenosis, but it may follow acute left heart failure and pleuro-pulmonary changes such as are seen in fibroid phthisis and hypertrophic emphysema.

(c) The progressive form of right heart failure is not uncommon and is quite familiar to those of us who reside in localities where acute rheumatic fever prevails. The early

symptoms are slight dyspnea on exertion, faint cyanosis of the lips, distention of the jugulars, and a wide variety of digestive disturbances. The pulse is rapid and may be regular or from extra systoles, irregular. As the condition progresses all the symptoms are intensified. Cyanosis deepens, edema and dyspnea increase, the patient is unable to lie down and has to sleep propped up with pillows or in a chair. Physical examination, in the absence of valvular lesions, is unproductive of clear cut findings. The transverse diameter of the heart is increased. The apex is downward and outside of its normal position, and the base is well outside the right sternal border in the fourth and fifth interspaces. The liver is greatly increased in size, its contour is smooth and rounded. Firm pressure on the liver causes distention of the jugulars. The urine is diminished and contains albumin. Its specific gravity, phosphates, and urates are increased and the chlorides diminished.

Auricular Failure—Auricular failure which is synonymous with auricular fibrillation or complete arrhythmia, may develop suddenly with no premonitory symptoms or signs in a heart considered normal in all respects. Lewis¹¹ and Vaquez¹² have observed such cases. However, cases of auricular fibrillation are often preceded by prodromata, such as an occasional extra systole, or an attack of paroxysmal tachycardia. It may follow fatigue or some infection, especially chorea, typhoid fever, or rheumatism, and it occurs more frequently with mitral stenosis than with any other heart lesion.

Auricular fibrillation is attended with a rather constant symptomatology. "Patients who possess the persistent disorder often experience occasional fluttering in the neck and chest and may be conscious of irregular heart action. They are prone to shortness of breath, exhaustion, and other symptoms of over taxation of the heart than those with similar valve lesions and a like degree of cardiac dilatation¹³". The pulse is irregular in volume, rate and rhythm.

Treatment—A clear conception of the pathology and a correct diagnosis are essential to the proper treatment of patients with heart failure.

We will consider the treatment under the captions of diet, physical agents and drugs.

The diet of patients suffering from cardiac failure, in the absence of edema, should be moderate in amount, well masticated and should contain but little salt and an abundance of fruit. When anasarca develops, fluids should be restricted to the smallest amount compatible with comfort, in all cases except those with slight edema. In severe cases, the

Karell¹⁴ regimen often proves satisfactory. It consists in taking 200 c.c. of milk and no other fluids, at four-hour intervals 8:00 a.m. to 8:00 p.m. As the condition improves, well-cooked and prepared cereals, crackers, fowl, eggs, and green vegetables should be added. When edema exists, salt should be prohibited and even after edema subsides only a limited amount should be taken.

Rest is essential for it slows the pulse, lowers the blood pressure and lessens materially the work of the heart. Rest in bed should be insisted on for ten or more days after the edema subsides.

Divers forms of exercise have been advocated. The Schoot¹⁵ method consists of a graduated, rather mild form of calisthenics. Oertel¹⁶ recommends walking up grades, varying in pitch from nine to thirty-six per cent. Exercise a little more each day, but always stop short of fatigue, is a safe rule to follow.

Paracentesis is indicated whenever there is a sufficient accumulation of fluid in either the thoracic or abdominal cavities to further embarrass the heart action.

Venesection and withdrawal of from 400 to 1,000 cc. of blood should be done whenever there exists an acute left or right heart failure, with which is associated marked cyanosis or urgent dyspnea.

Acute left or right heart failures are emergency conditions and demand heroic measures. Give by hypodermic injection, one-fourth grain morphine sulphate, at four hour intervals, as may be indicated for purposes of relieving anxiety, pain, or dyspnea. In the presence of pulmonary edema, give subcutaneously, one-sixtieth grain of atropine sulphate at proper intervals until full physiological effects are obtained. If no digitalis has been given within ten days, 1/240 or 1/120 grain of ouabain should be given intravenously. This drug should be given at from twelve to twenty-four hour intervals in 1/240 or 1/120 grain doses until four or five doses have been given. In the event ouabain is indicated the patient's heart should be rapidly digitalized by the Eggleston¹⁷ method. A fifty per cent solution of glucose given intravenously 50 cc. at four to twelve hour intervals is particularly serviceable when the vital spark is barely flickering. For the first twenty-four hours or more, no food except water or orange juice should be given and the amount should not exceed one

quart. After the acute stage has passed it is advisable to give thirty drops of an assayed tincture of digitalis every eight hours for at least ten or more days, especially when auricular fibrillation co-exists. The patient should remain in bed during this period.

The measures hitherto discussed are applicable for the treatment of angina pectoris of decubitus, pulmonary edema, and the failures associated with acute cardiac dilatation. For an attack of cardiac asthma $1/4$ grain of morphine sulphate together with $1/100$ grain of atropine sulphate usually suffices. This should be followed by a period of ten or more days rest in bed, during which time the heart should be kept digitalized.

The treatment of the progressive form of right heart failure has, as its primary purpose, the alleviation of the symptoms which result as a consequence of the pathological changes in the heart. Then, too, special effort should be directed toward improvement of the impaired kidney function, the hepatic engorgement and the gastro-intestinal congestion.

In the early stages, rest in bed, a saline purge, regulation of the diet and restriction of the salt intake are sufficient to accomplish the desired result. Should these measures fail, as evidenced by the continuation of edema, dyspnea, and diminished urine output, digitalis therapy should be instituted. No method yet suggested is comparable to that of Eggleston's for administering digitalis, provided, the patient is in a hospital or has a competent trained nurse.

The plan herein suggested is particularly adapted to those patients who have no nurse and whose intelligence and training are such that they should not be intrusted to employ the more efficient body weight method of Eggleston.

To adults whose weights vary from 120 to 200 or more pounds, give 50 to 60 drops of an assayed tincture of digitalis every six hours for nine doses. Stop treatment for twenty-four hours and then repeat in the same manner as above described. It is seldom necessary to repeat more than once. After edema, dyspnea, and portal engorgement have subsided, the digitalis should be continued

in 25 or 30 drop doses at eight hour intervals for two or more weeks.

In only one case in a series of more than fifty, so treated, has nausea been troublesome and no other evidence of digitalis poisoning has occurred.

If, despite this treatment, the edema and dyspnea persist, more stringent measures should be resorted to by supplementing the action of digitalis with one or more of the many diuretics. Three drams of Basham's mixture, to each dose of which has been added 15 or 20 grains of potassium acetate, given at four hour intervals, frequently produces free diuresis. Diuretin, ethylene-diamine-theophyllin, theobromin, merbaphen and salyrgan are useful. The combination of powdered squill and compound jalap powder has often produced the desired result.

In refractory cases, stop the use of digitalis for ten days, then give intravenously $1/120$ grain of ouabine once every twenty-four hours for five days. Some of the cases that have been refractory to digitalis before using ouabine then respond beautifully to digitalis, which should be continued as hitherto described under digitalis therapy.

When auricular fibrillation is associated with a failing myocardium, the primary purpose of treatment should be directed at the failure, and this is best attained by digitalization of the heart. If digitalis fails resort to quinidin.

Quinidin may be given to both types of complete arrhythmia, that is those associated with failure of the ventricles and those in which no detectable failure exists. It is particularly with the latter that this drug produces such wonderful results.

Most authorities advise that on the first day 3 grains be taken twice daily, and if no idiosyncrasy exists, 6 grains be taken thrice daily thereafter until the desired result is attained. If there is no effect produced by the sixth day, discontinue its use. When the fibrillation ceases the dose should be gradually reduced to the point that further reduction would permit the reappearance of the fibrillation.

In conclusion, let me insist, that in the treatment of persons afflicted with cardiac

disease no effort be spared in the search for foci of infection, and, if such be found, appropriate treatment be given. By no epochal discovery or invention, but by the slow acquisition of knowledge, the present concept of the victim of heart disease, has in no small measure, changed from despair to one of lively hope.

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Discussion on Paper of Doctor Revell

DR. EVERT A. BANCKER, JR., Atlanta: It is a pleasure to discuss this paper so ably presented by Doctor Revell for it is a subject in which we are all vitally interested. Heart disease is the leading cause of death at present. Sudden death from heart failure is common but a high percentage of patients suffer a gradually increasing congestive heart failure.

Doctor Revell has given us a fundamental conception of the mechanism of heart failure and has differentiated right-sided from left-sided failure. I should like to emphasize dyspnea, tachycardia and pain as being the three cardinal symptoms of early failure regardless of the etiologic or anatomic causes. Right heart failure is usually a gradual process because blood backs up in the peripheral circulation and thus relieves to some extent the heart. In left-sided failure there is an immediate increase in pulmonary capillary pressure as the left ventricle is unable to expel the blood being pumped to it continuously by the efficient right ventricle, and severe dyspnea results.

A patient suffering congestive failure breathes best in the upright posture because gravity affects the pulmonary pressure by fostering sedimentation of the blood in the dependent parts of the lungs. The vital capacity is less in the prone position than in the upright position and the change is more marked in congestive failure. I believe this to be the most important factor in the production of orthopnea.

It is important to differentiate bronchial from cardiac dyspnea. In the former the rales are squeaking and musical and in the latter they are moist.

Many tests have been devised for the diagnosis of early cardiac failure but the simplest and most efficient is the measurement of the venous pressure by observation of the extent of the column of blood in the external jugular vein with the patient in the supine position.

The head of the column should be a little below the level of the manubrial line with a normal person in the supine position with the head upon two pillows.

It is most important to determine if possible the etiologic factors responsible for the cardiac failure in order to advise intelligent treatment. Especially is this true in hyperthyroid and syphilitic heart disease with congestive failure.

I prefer using the tablet or capsule preparations of digitalis because of their more accurate dosage, greater potency, better standardization and greater stability.

Quinidine should not be given to patients who have suffered hemoptysis or who have venous engorgement or much cardiac enlargement. If, after a preliminary test dose of 3 grains, there are no signs of idiosyncrasy, the drug may be given in 6 grain doses every 4 hours day and night until the desired effects are obtained. If it is not administered through the night the drug is so rapidly eliminated from the body that the desired accumulated action is difficult to obtain in a limited time. Quinidine should be discontinued if urticaria develops.

A mercurial diuretic, such as Salyrgan, is sometimes useful in treating patients with persistent edema and no evidence of primary nephritis.

Two new forms of treatment which may prove of value in this type of case are the administration of glucose covered with insulin and the use of adrenalin cortex extract.

Although the backbone of any diagnosis is a careful history and a painstaking physical examination, serial electrocardiograms often give valuable diagnostic therapeutic and prognostic information.

DR. THOMAS E. ROGERS, Macon: Doctor Revell has pretty well covered the subject of congestive heart failure. There are two or three points that he brought out which I should like to stress.

I believe if there is any one thing that we have failed to do in the past it is to give a sufficient amount of digitalis in congestive heart failure. When you see a patient who is decompensated and badly in need of digitalis, figure out about how much digitalis that patient needs, and get it into him as quickly as possible. If you use the powdered leaf or tablets, you can figure a grain for each ten pounds of body weight, exclusive of edema. If you use a tincture, be sure it is a good tincture, and figure on a dram for thirty pounds of body weight. A man weighing 150 pounds will need 5 drams of tincture. My rule is to give him a dram every four to six hours until

he has had three or four drams, and cut him down to 20 minims every four or six hours, and continue until you get your effect. After you get your effect, you can leave it off for twenty-four hours, and let the effect catch up, and then start with maintenance dosage. As you know, digitalis has a cumulative effect, and is eliminated very slowly. Give the patient only the amount that will be eliminated in a day. You must maintain digitalization. In the old days, the doctors would leave off digitalis after the patient was digitalized and wait until the patient needed it again. That is wrong. Don't let him decompensate if you can help it. You do not only take a chance on his life, but every time he decompensates he is worse off than he was before.

There is another thing I want to talk to you about. Be sure that you know whether your patient is getting drops or minims. It takes about two and one-half to three drops from the average dropper to make a minim. I have dropped 45 drops from an average dropper, and it makes about 20 minims.

Of course, to give digitalis the best way is by mouth. If not retained by mouth, then give it intravenously, or per rectum. Do not depend upon subcutaneous administrations if you want prompt action from digitalis. It is absorbed too slowly. It is readily absorbed from the rectum, if well diluted. Another thing I want to stress is rest, as Doctor Revell brought out, giving morphine to obtain it, if necessary, but I would say that it is safer and better to give small doses of morphine, repeated often, than to give a large dose to start with.

After the patient improves and is able to get up and about, the question often comes up as to how much exercise to allow him to take. He needs exercise. By graduated exercise, you may not be able to build up his cardiac reserve, but you will help him to maintain what strength he has in the heart muscle. McKenzie taught his patients to obey the heart. That is, he allowed them to exercise to the point of dyspnea, always stopping when they reach that point. I have enjoyed Doctor Revell's paper very much, and also Doctor Bancker's discussion.

DR. R. L. MILLER, Waynesboro: I enjoyed Doctor Revell's paper and I believe he covered the subject thoroughly. I wish to say just two things. There is no drug in the pharmacopeia which serves us as well in heart disease as opium. All of these gentlemen have spoken of the use of morphine. We know that morphine often leaves these patients terribly nauseated, and this is not a desirable condition to have in a patient with a weak or failing heart as it already has as much load on it as it can carry. Pantopon will serve your purpose much more satisfactorily, as it does not produce as much nausea as morphine and you are giving more of the whole drug than when you use an alkaloid.

We must not, in the use of digitalis, forget the fact that by what ever dose or manner it is given as soon as it reaches the heart muscle it is stored. It splits in a very short time and begins to give its

digitalis action which continues over a long period of time. It is therefore possible to space your doses so as to maintain a continuous digitalis action without resorting to large doses.

DR. S. T. R. REVELL, Louisville: (closing) I want to thank Doctor Bancker, Doctor Rogers and Doctor Miller for their discussion of my paper.

You all know that in the presentation of a subject of this kind it is utterly impossible, in the time allotted, to cover many of the salient features that one might wish to discuss.

THE PRESENT STATUS OF IODINE THERAPY IN HYPERTHYROIDISM*

D. HENRY POER, M.D.

Atlanta

The use of iodine in the preparation of the hyperthyroid patient for operation has been now generally accepted by internists and surgeons.

The history of the use of iodine in the treatment of goiter dates back more than two thousand years as the Greeks used sponge charcoal for this purpose; ashes of sponges and seaweed were described in the treatment of goiter by Palermo in 1170. Switzerland, the home of goiters, lays claim to the first use of iodine in more modern times, as Coindet reported improvement in two-thirds of a series of one hundred cases. It is interesting to mention at this point, Trousseau's famous mistake of prescribing tincture of iodine in place of tincture of digitalis in the case of a patient extremely ill with exophthalmic goiter; this was followed by a prompt subsidence of all the toxic manifestations.

Kocher advocated the use of iodine in the treatment of goiter in 1904 and again in 1910 and 1911, and this was followed by its use in practically all types of goiter, including the benign adenomas and the endemic forms. This indiscriminate use of course discredited its value in all forms, so that it was not until 1923, when Plummer presented the results of his work at the Mayo Clinic that iodine was put on a firm scientific basis in the treatment of exophthalmic goiter. Plummer gave his patients 10 drops of Lugol's solution, one to three times per day, as preoperative treat-

*Read before the Medical Association of Georgia, Macon, Ga., May 10, 1933.

ment and noted that "two-thirds of them were greatly benefited—and only one in twenty received no benefit." This was followed by a drop in the operative mortality of about 5 per cent to less than 1 per cent where it stands today.

Many theories have been suggested to explain the action of iodine in hyperthyroidism, but no one of them has been established. Plummer's two-product hypothesis has been widely accepted; his idea is that the thyroid gland functions in such a way as to produce a fluctuating amount of an abnormal substance, probably thyroxine unsaturated with iodine, as well as excessive quantities of normal thyroxine. The toxic abnormal substance is responsible for the characteristics of exophthalmic goiter, i. e., exophthalmos, tachycardia, nervousness, gastro-intestinal crises and much of the increase in basal metabolism. The effect of iodine is to control or abolish all the evidences associated with the abnormal product.

Cases of hyperthyroidism will present symptoms of varying degrees depending upon the amount of these products generated; the effect of iodine is likewise variable for the same reason, so that the effect in some cases is marked while in others it is comparatively slight. Marine has explained the action of iodine on the basis of an excess amount of colloid; this is produced rapidly and blocks the acini so that thyroxine does not reach the circulation in normal amounts.

No attempt has been made in this study to differentiate between exophthalmic goiter (Graves' Disease) and hyperthyroidism associated with adenomas (toxic adenomas; nodular goiter). It was not considered pertinent to the discussion at hand to enter into this controversy because it has been substantially proven that the action of iodine is practically the same in each. However, it must be borne in mind that iodine should never be administered in cases of adenomas without toxic manifestations, because of the potential danger of stimulating these glands into overactivity. When these inactive nodular glands are converted into the overactive adenomas with hyperthyroidism, for some reason as yet unexplained, they do

not fare well and fatalities are comparatively frequent. For this reason we must all bear this important point in mind constantly, because this medical tragedy still occurs too often.

The Effect of Iodine in Hyperthyroidism

With the patient at complete rest in bed, iodine will produce a typical remission of all the toxic symptoms of hyperthyroidism in from 10 to 18 days; an average of 13.5 days in one series, which is approximately the same as in other clinics. Definite evidences of improvement begin within 48 to 72 hours; the pulse rate drops sharply, the emotional state quiets down, and there is a decline in the basal metabolic rate, which averages 3.7 points per day. The point of maximum improvement is estimated by the fall and stabilization of the pulse and basal metabolic rate and the lessening of all the clinical evidences of the disease; at this point operation should be performed. This usually consists of a bilateral subtotal lobectomy done under local anesthesia, with removal of at least five-sixths of each lobe. It is important to continue iodine for several days following operation; sudden withdrawal apparently increases the possibility of a postoperative crisis.

A remission of this type occurs in 80 to 90 per cent of all cases of hyperthyroidism; in these the basal metabolic usually drops more than half way to normal. The dosage necessary to cause a typical remission has been found to be comparatively small; Thompson et al, using Lugol's solution (liquor iodi compositus, U.S.P.) were able to produce a complete remission with only one drop (6 mg.) of iodine per day. They also showed by using smaller doses ($\frac{1}{2}$ and $\frac{1}{4}$ drop) that the effect of iodine in hyperthyroidism is not the all-or-none type, but definitely related within limits to the size of the dose. For this reason larger doses of iodine than the thyroid can utilize should be supplied so that colloid may be stored and the output of thyroxine decreased. Five drops, one to three times per day, is adequate for this purpose; more than this probably does no harm, but cannot be utilized.

In 8 to 10 per cent of hyperthyroid cases iodine fails to exert any influence whatever, or the effect is very slight. No reason for this has been discovered; perhaps some of these patients have received iodine in some unknown form (iodized salt, etc.) and have thus become refractory to its action. It is well known that these patients constitute serious operative risks because of the danger

of crisis; before attempting surgery they should be treated medically over a long period of time (2 to 6 months), and then given iodine again as a preoperative measure. Many of them again become sensitive to the action of iodine in this period of time.

*Dangers of Long Continued Use of Iodine
In Hyperthyroidism*

That a recurrence of all the toxic manifestations of hyperthyroidism, including a rise in the pulse and basal metabolic rate, occurs when the administration of iodine is continued beyond the period of maximum response is now established. All the signs and symptoms recur, frequently in an exaggerated form and the basal metabolism increases beyond its former level. It has also been found that these evidences of the hyperthyroid state recur regardless of whether the administration of iodine is continued or not; this would seem to prove that iodine alone will not control this disease.

For these reasons, a definite plan of treatment to include operation at the point of maximum improvement, should be agreed upon *before any iodine is administered*. Frequently patients responding so quickly to bed rest, sedatives, and iodine therapy do not understand the temporary nature of this action and question the necessity of surgery unless this has been thoroughly explained to them in advance. If for some legitimate reason it becomes necessary to postpone or delay operation, omit iodine from the treatment entirely until these contraindications have been removed.

Further proof that iodine alone will not cure hyperthyroidism is furnished by the numerous occurrences of the phenomenon known as "post-iodine reactions." This has been demonstrated by Starr et al who deliberately treated several hyperthyroid patients with iodine over a long period of time. In each of these, the recurrence was worse than the original condition so that operation had to be postponed and was a much more serious procedure. Even when the administration of iodine was stopped, the post-iodine reaction occurred and was considered responsible for it.

Another phenomenon which occurs after the administration of iodine over too long a period of time, is the development of refractoriness to its action. While it may be

true that some patients are naturally not affected by iodine, this percentage is very low (1 to 3 per cent). Most patients who fail to benefit by iodine, fail because of the continuation of iodine past the initial period of improvement. When this occurs, iodine has no effect on any of the clinical evidences of the disease; the pulse and basal metabolic rate rise instead of drop and the patient is more likely to develop a crisis. Thompson and Thompson studying this condition in a small series found that the refractoriness disappeared after iodine was discontinued in 24 days (average); that refractoriness may follow a large or small dose of iodine; and that before operation is performed iodine should be omitted for a sufficiently long period of time for the refractoriness to disappear (3 to 4 weeks). In one of their cases operation was performed without waiting and was followed by a postoperative crisis and death of the patient. Altogether too frequently the lives of patients are being jeopardized in this manner and this is almost entirely avoidable because its control is in our hands.

The last and without doubt, the most serious danger in the long continued administration of iodine in hyperthyroidism, is the development of crisis or "storm." These usually occur following operation and constitute the principal cause of death. They usually occur in from 24 to 96 hours and present one of the gravest surgical emergencies known to exist. The patient becomes very wild, nervous, and excited; does not recognize relatives or friends and stays in constant motion. The temperature rises rapidly to 105 to 106 degrees and above, accompanied by a corresponding increase in pulse rate to 200 and above. Iodine at this point is our most valuable therapeutic agent, and when its action has been lost through indiscriminate use before operation, there is no substitute and death frequently results. In one large series of cases reported lately, seven out of eight deaths due to postoperative crisis, could be directly attributed to the misuse of iodine. The surgeon reporting this series was led to conclude "that iodine has no place in the medical treatment of goiter because it deprives the pa-

tient and the surgeon of that necessary protective action. Iodine should be employed solely to prepare the patient for operation." Certainly this one condition alone is of sufficient seriousness to prevent one from prescribing iodine to hyperthyroid patients purely as part of the medical regimen.

The danger of administering iodine to young girls who present smooth, symmetrical enlargements of the entire thyroid gland during the period of puberty and young adolescence is probably well known to all. This is a normal physiologic process to meet the increased demands during this period and needs no treatment except scientific neglect. It has been proven that iodine administered to these cases frequently converts them into active hyperthyroid states; if any treatment is indicated it should be strictly medical (bed rest and sedatives). It is also true that the thyroid gland in some young women enlarges during the menstrual period each month; this likewise is physiologically normal and requires no treatment.

The use of iodized salt and foods high in iodine content has become quite a fad with many people today. This is not free from danger and should not be encouraged. The thyroid gland is capable of assimilating such a small quantity of iodine normally that sufficient amounts are usually available without extra feedings. In those areas where the iodine content is low, prophylactic measures under proper control are justified but there is no lack of iodine in any part of the Atlantic plateau.

Conclusions

1. Iodine will produce a remission in 80 to 90 per cent of all cases of hyperthyroidism.
2. This remission is characterized by a drop in basal metabolism of at least a half on the average (3.7 points per day, average).
3. The remission begins within 48 to 72 hours and reaches the point of maximum response in 10 to 18 days; an average of 14 days.
4. A very small dose of iodine (6 mg. per day) is necessary to produce the maximum response; a larger dose is advocated to insure this maximum benefit. The effect of iodine is not of the all-or-none type; it

has also been shown that an excessive dose of iodine does not produce any harmful effect.

5. Because of the similarity of response to iodine in both the hyperthyroidism associated with Graves' Disease (smooth enlargement with exophthalmos, etc.) and that appearing in toxic adenomas (nodular enlargements), it may be said that the proper use of iodine *is an adequate dose* (5 drops per day at least), *given over a period of 10 to 18 days until the point of maximum response is reached; at this point operation (subtotal lobectomy) should be performed.* Because of the dangers of post-iodine reactions, development of refractoriness to iodine, inability to cure hyperthyroidism permanently, and the loss of its beneficial action in post-operative crises, *iodine should not be used in any other manner in hyperthyroidism.* If for any reason it becomes necessary to postpone or delay operation, iodine *should not* be administered until these reasons have been removed. A strictly medical regimen consisting of bed rest, sedatives, ice caps, and such local treatments as are indicated, should be instituted until the patient is prepared for the surgical procedure.

6. Iodine has no place in the treatment of the physiologic enlargement of the thyroid gland during puberty and early adolescence in females; its indiscriminate use in foods, patent remedies, water, etc., is also condemned as unscientific and dangerous.

In closing I would like to quote a statement made by Dr. Henry Christian at the meeting of the Association of American Physicians in May, 1924:

"I suspect that a great deal of damage is going to be done with iodine to our thyroid cases. Our results in the Massachusetts General Hospital and the Peter Bent Brigham Hospital have shown that iodine is very valuable as a preparation for operation because it controls the situation temporarily. This control is limited, and continuation of treatment in a large percentage of cases seems to result in a later loss of benefit from the iodine. If it is discontinued there may be a marked increase in symptoms, and in both events the basal metabolism swings to a point which is much higher than that prior to io-

dine therapy. Consequently there is considerable danger in connection with operation if iodine is omitted too soon or continued too long."

Might I repeat the surgeon's viewpoint: "Iodine has no place in the medical treatment of hyperthyroidism."

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Discussion on Paper of Dr. D. Henry Poer

DR. CHARLES E. WAITS, Atlanta: Doctor Poer has outlined to you definitely the proper use of iodine in the treatment of hyperthyroidism, and I wish only to emphasize a few points that he made. First to support him in his opening statement that iodine has no place in the medical treatment of hyperthyroidism. If we look on the drug as an adjunct to surgery, rather than a drug that has a curative effect in hyperthyroidism, then, and only then, will we serve intelligently our duty to the patient.

I think it is our duty as physicians to indulge in a little patience, especially after taking a history and making a diagnosis of hyperthyroidism; to explain the nature of the disease to our patients and explain further that the effect of Lugol's Solution or iodine in any form is only temporary, and that unless they come to operation within a given length of time, the average, as Doctor Poer says, fourteen days, they will lose their best opportunity to get well. I think we agree that any patient who has definite hyperthyroidism, whether it be adenoma or Graves' disease, who does not undergo a subtotal thyroidectomy, will not get well. You may put the patient at rest for a period of three months, give x-ray therapy, or iodine, and he or she will come to a sense of false security so far as health is concerned, and probably reject what should be done, subtotal thyroidectomy. So unless we indulge in describing to the patient the nature of the disease and what he or she must do to be permanently well, we have not done our duty.

There is one phase of the subject that Doctor Poer did not have time to discuss, that is a patient who has hyperthyroidism and who comes for some other surgical condition, say, acute appendicitis, gallbladder disease, or any disease which demands surgical intervention. Hyperthyroidism had not been recognized, and

soon after operation the patient goes into the type of thyroid crisis which we frequently saw before we knew about the value of iodine. We are now confronted with an added acute condition, a picture that demands action, and we have to treat the patient as we did the one who had perhaps just a single ligation before the value of iodine was appreciated. It is not a mistake in this case to resort to intravenous iodine, Lugol's Solution, or sodium iodide, plus other well known methods used in the management of a thyroid crisis.

In conclusion may I again emphasize Doctor Poer's advice, that is please do not, until you are under definite contract for thyroidectomy, give iodine to a patient with a diagnosis of hyperthyroidism.

DOCTOR POER: (presenting patient). This young lady illustrates one point well. That is what we might call the proper treatment of a case of hyperthyroidism following an attack of influenza last November. She had the typical signs. She has exophthalmos, which has not disappeared. In the preoperative treatment of this case, Doctor Chrisman did not prescribe iodine. He sent the case to a surgeon, and the patient was put on bed rest, iodine, and luminal, and she had a subtotal thyroidectomy, and we believe there was a complete cure. Of course many more months will have to elapse before we can say that conclusively.

The idea is to emphasize this one point, that iodine was not administered until after surgery consultation had been held, and she reacted as nicely as any patient could.

EFFECTS OF EUGENIC STERILIZATION AS PRACTICED IN CALIFORNIA

1. One effect only—it prevents parenthood.
2. It in no way unsexes the patient.
3. It is a protection, not a punishment; it therefore carries no stigma or humiliation.
4. It is approved by the patients who have been sterilized.
5. It is approved by their families and friends.
6. It is approved by the medical staff, social workers, probation and parole officers who have come in contact with the 8,506 patients sterilized in the last 25 years and up to January 1, 1933.
7. It permits many patients to return to their homes, who would otherwise be confined in institutions for years. It thus keeps homes together and prevents the break-up of families.
8. It protects children from being born to be brought up by mentally diseased or mentally deficient parents or by the state.
9. It takes a great burden of expense off the taxpayers, and enables the state to care for many more patients than would otherwise be possible.
10. It has been followed by a marked decrease in sex offenses.
11. It enables many handicapped persons to marry and to have a life normal in most respects, who without sterilization could not be allowed to marry.
12. It is a practical and necessary step to prevent racial deterioration.

THE HUMAN BETTERMENT FOUNDATION.
321 Pacific Southwest Building
Pasadena, California.

ACRODYNIA*

HENRY D. YOUMANS, M.D.
Lyons

According to J. B. Bilderback all cases of acrodynia are strikingly alike, but like many other diseases, there are all grades of severity. In a typical case the child is a picture of abject misery. It is so striking that once seen will not be forgotten. It would be perfectly permissible to use the term "acrodynia facies." The child cries piteously, and dislikes to be disturbed; when taken up he often cries to be placed back in bed. The position in bed is characteristic. He lies curled up on his side with his head buried in the pillow; frequently assuming the knee-chest position, or sits with his head held between his legs.

The outstanding objective symptom is the color of the hands and feet, particularly the fingers, they are bright pink or dusky red, the erythema shading off at the wrists. The line of demarkation is not as abrupt as in pellagra. Frequently the intense color of the hands and feet fades, to reappear after a few days. Desquamation involving the palms and soles, but more particularly the fingers and toes, is a distinctive symptom. The peeling of the hands and feet occurs with marked regularity; they appear edematous, but they are not; they are invariably cold and clammy, due to vasomotor disturbances and feel as if they had been immersed in water for a long time. Wood uses the term "sodden with perspiration."

In some cases the cheeks and tip of the nose are brilliant red and frequently there are maculopapular skin eruptions over the trunk and thighs; not constant in type, and frequently modified and altered by excessive perspiration, which macerates the skin. Often the perspiration is excessive, and the saliva is secreted in great quantity, and flowing from the mouth.

The nails are often discolored and frequently fall off. In many cases the hair is lost or the child pulls it out. Frequently a tooth will fall out. Without evident local disease of the mouth, a perfectly sound and beautiful incisor will be found in the child's

bed. The mucous membrane will probably be a little redder than normal, but that is all. After a few days another will fall out. In some cases I have seen all the teeth erupting in the lower jaw—4 incisors and 2 molars fall out. Sometimes an infection may develop in the mouth after the teeth are lost; the gums then may be swollen and soft.

With this striking clinical picture is associated a most severe and devastating nervous and mental involvement. Frequently the child acts as if possessed, throwing itself about, and is with great difficulty kept in bed, fighting the nurse or mother like a maniac for hours at a time, then falling into a stupor from sheer fatigue. During the stage of excitement drugs are of little help. Bromides, paraldehyde, phenobarbital and chloral are useless; codeine is of little value. Nothing but massive doses of morphine given hypodermically helps, and there are certain well-known reasons why morphine should not be given to children daily. In some cases insomnia has been extremely marked, lasting for days at a time; one feels that the child will die of sheer exhaustion. The neurologic and mental symptoms—mania, depression and apathy, are the outstanding ones. A true paralysis does not occur, but naturally the musculature lacks tone. The patella reflexes are diminished or absent, unless there is an associated pyelitis.

Excruciating pain occurs in the hands and feet. My patient, a boy of 11 or 12 years, very much underweight and emaciated, told me that his hands and feet seemed on fire, and at times he felt like sinking his teeth into them and tearing the flesh from the bones. All children thus affected almost constantly rub their hands and feet together, or wish to sit with them in a pan of cold water to relieve the burning and itching.

Anorexia is a problem. They refuse food and often to keep them alive they have to be gavaged. My patient had a morbid appetite, eating all the old papers and song books about the house, even the old family Bible had to be placed under lock, after he had eaten half of it. Freer, the noted German internist, has called attention to an overlooked symptom, that of high blood pressure.

Harold T. Nesbit states that in 1830 Char-don, described an epidemic of this disease that ravaged Paris, affecting 40,000 individuals; to this disease he ascribed the name acrodynia. The epidemic quickly died down, and no interest was displayed in the literature concerning this disease until 1914, when Swift of Australia, reported several cases of a supposedly new malady, to which he ap-

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plied the name erythro-edema, because of the cardinal symptoms of redness and swelling of the hands and feet. Bilderback deserves the credit for first having recognized the disease in this country. He presented ten cases of "a disease of unknown etiology and diagnosis" January 17, 1920, at the North Pacific Pediatric Society. The same year Weston reviewed Bilderback's cases and definitely identified them as the acrodynia described by Chardon. Since then over 200 cases have been reported by many authors, all with a striking similarity of symptoms. The disease has been variously designated as: "pink disease," by Clubbe of Australia, "erythro-edema" by Swift of Australia, "Freer's disease," in Germany, following presumably Freer's first description of the entity. Most Canadian and American authors use the term acrodynia as it was accurately described over a century ago. This disease which occurred then affected adults chiefly, but the cases reported at the present time indicate that 96 per cent occur in children less than 6 years of age; consequently the name juvenile acrodynia has been suggested by Wycoff. The multiplicity of names has, in all probability, been due to too insufficient knowledge of the etiology, pathology and pathogenesis to classify it properly.

The cause of acrodynia is not definitely known. Food deficiency, infection, arsenical intoxication and neurosis of the vegetative system have all been considered as factors. Preponderance of opinion has until recently favored infection as the etiologic factor, although the evidence is inconclusive. Rodda and Byfield believe that focal infection is responsible for the disease; they claim that removal of the tonsils and eradication of sinus infection is the proper treatment, though their claims have not been confirmed. Most writers believe that infection of the upper respiratory tract is an accompaniment rather than the cause of the disease. Weston suggests that there is a body weakness and a consequent susceptibility to disease, due to the deficiency or absence of one or more of the important food elements, which is very likely a contributing factor to this disease.

At the present time case reports appearing in the literature indicate that this theory is rapidly becoming the prevailing opinion. Preponderance of acrodynia in the northern part of the United States and Canada, indicate that climate bears an influence. Review of the literature indicates but a scattering of case reports from the South, as compared with several hundred reported from

the North and Canada; but it is possible, however, that this condition is erroneously classified with pellagra so prevalent throughout the South, because of the similarity of the skin lesions of the two diseases.

Treatment

There is no specific treatment.

Symptomatic treatment includes atropine for the excessive perspiration and sedatives for the insomnia; external applications for the burning and itching of the extremities is of little value. Sweet, who has had wide experience with the disease, has made a valuable contribution to the therapy by giving ultraviolet lamp treatment. He has been able to make the patient more comfortable and shorten the course of the disease. It is true that acrodynia is associated with an upper respiratory infection, and Rodda feels that he has been able to shorten the course of the disease by removal of the tonsils and adenoids. He reports 17 patients that he feels were greatly benefited by the operation. Feeling that some of the cerebral symptoms might be caused by pressure, I have restricted the fluid intake with gratifying results, insomnia is lessened and irritability is not so pronounced. Zahorsky noted rapid improvement following the addition of brewer's yeast and viosterol to the diet of a child suffering with acrodynia after 6 weeks ineffective quartz lamp treatment. McLendon considers acrodynia a deficiency disease and has reported brilliant results by using brewer's yeast and viosterol and a well-balanced diet rich in vitamins, which hastens convalescence. The benefits noted by these authors can be attributed to supplying the missing vitamins, and is confirming evidence that acrodynia is a deficiency disease.

Discussion on Paper of Dr. Henry D. Youmans

DR. WILLIAM A. MULHERIN, Augusta: I want to stress just a few points so splendidly brought out by Doctor Youmans.

Acrodynia means painful extremities. We do not know what is the cause of it. We do know that it prevails in children.

Doctor Youman's case is of interest because the age of the child is ten or eleven years. Usually it is from four months to four years; rarely after five years you will find it. The picture is clear-cut. In the few cases I have seen, there are two stages. The

first is before they come to the doctor. They are restless, fretful, irritable children, who do not sleep well, losing weight and losing strength. When they come to the physician, there is the combination that ought to put you wise. You have the cutaneous manifestations. The hands are swollen, a purplish red, more marked at the finger nails, tapering down, and redness disappearing about at the wrist. There is not a sharply-defined demarkation existing as in pellagra. The hands are cold, clammy, and sometimes ulcerations on the finger tips. A restless, fretful child, burying its head in the pillow, a picture of abject misery, wanting to put its feet in a tub of cold water, gives you a picture you cannot mistake. Also, as Doctor Youmans mentioned, the teeth fall out at times, the gums will be swollen, and the child will try to pull out its hair, or the hair will fall out.

The mortality is about 5 per cent. The majority of them get well in about seven months or a year.

As regards treatment, we do not know the etiology. Some claim it is a deficiency disease, Weston, mainly. Others claim it is due to a focal upper respiratory infection. Byfield, at Minneapolis, gives excellent reports on results in shortening the course of the disease by removal of infected tonsils. The whole treatment is symptomatic. If I had a case, I think I would utilize all of them. Some use the ultraviolet ray. If you feed the child a well-balanced diet, giving him yeast, viosterol, ultraviolet ray, remove any foci of infection, you will have given that child what is considered the best treatment.

DR. C. HALL FARMER, Macon: I can add little to this excellent paper. I have seen one or two cases of acrodynia during my hospital service with Doctor Smith of North Carolina. I want to emphasize that I think the removal of the focal infection offers these children more than anything else. I don't believe you can build up their nutritional state, regardless of how much you try, unless you clear up the focal infections in the upper respiratory tract. In the two cases I observed, the second patient did not respond at all until the tonsils were removed and the infections in the nose and throat were adequately treated.

DR. HENRY D. YOUWANS, Lyons (closing): I will say this about the case that I had: The only treatment that I gave him that did any good was a well-balanced diet of nourishing food, and he fully recovered in six or eight months.

Mr. W. G. Campbell, Washington, Chief of the Federal Food and Drug Administration, announces that 151 consignments of foods and drugs found to violate the national pure food and drug law were seized during July. The Administration sent to the Solicitor of the Department of Agriculture recommendations for prosecutions of cases involving 23 stocks of foods and drugs.

FIBROID TUMOR OF MESENTERY*

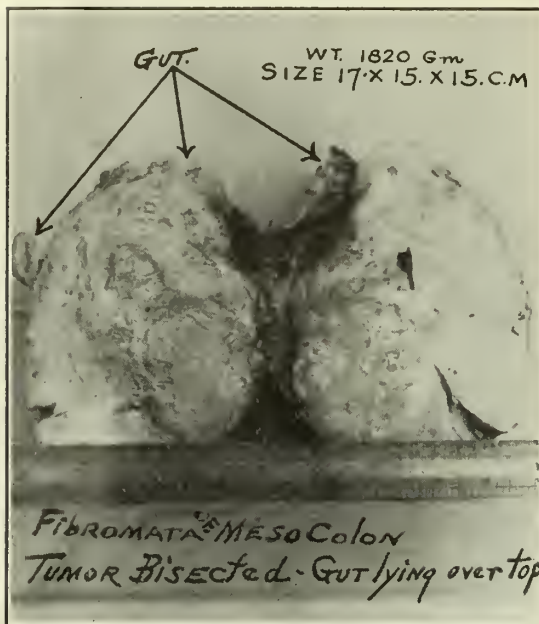
CASE REPORT

OLIN H. WEAVER, M.D.
Macon

Fibroid tumors of the mesentery are rare. They have been found much less in children than in adults, but it may be that those found in adults were present in childhood though not causing symptoms sufficient to call attention to their presence. The Mayo Clinic reports only 25 cases of tumors originating between the leaves of the mesentery out of 820,000 patients admitted. Of these only two were fibromas, neither of which were in children. Dr. J. E. Summers of Omaha, Nebraska, in reporting "a case of solid pure fibroma of the mesentery in children" in the August 1932 issue of *Surgery Gynecology and Obstetrics* gives an exhaustive study of the literature bearing on the subject, and I am quoting at length from his statistical data in preparing this report. "In 1897 Harris & Herzog, reporting a solid mesenteric tumor referred to 65 additional cases, of which only five were in children. Of the children's cases all were mixed types, no fibromata.

"W. H. Greer in 1911 reported one pure fibroma in a child, operated upon by Folet. Dr. A. Szenes in 1918 in a report on solid tumors of the mesentery mentions the case referred to by Greer; no others in children were reported. De Courcy & Maloney in 1925 in a report refer to the Greer case. Margagni, Bevan, Kyle and Bland-Sutton report 40 cases with no mention of children. "Barrington-Ward's *abdominal Surgery of Children*" states that solid growths are very rare in children. The case of Greer's is mentioned, also one in a child 3 years old, but the nature of the tumor is not mentioned. In summing up, Dr. Summers says "a research of the bibliography on solid tumors of the mesentery discloses but one case of pure fibroma in a child, the one referred to by Greer. Out of the entire list, 128 cases have been taken as actual ones to base our findings. Of the 128 only 16 pure fibromas were found, 7 in

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women; 4 in men; 4 no data given and one in a child. So far, the records show only 2 cases of fibromata in children to have been reported, that of Greer, and the case of Dr. Summers. It is on account of the rarity of these growths, especially in children, that I thought it of sufficient interest to report the following case, which was admitted to my service at the Macon Hospital in August 1932.

The patient was a negro female, 10 years old. Family and previous history were negative. One month prior to admission her mother noticed an enlargement of the child's abdomen. There had been no pain, no functional derangement of the gastrointestinal tract, and except for the presence of the abdominal enlargement, there had been no sign of any trouble. Physical examination revealed a rather poorly nourished child. Pulse 100; Temperature 99; Respiration 17; Urine normal; R. B. C. 3,800,000; W. B. C. 6,000, Polynuclear cells 63 per cent, small lymphocytes 36 per cent, large lymphocytes 1 per cent. Hbg. 70 per cent; Wassermann negative. Physical examination was otherwise negative except for a firm, rounded partially movable mass, occupying most of mid-abdomen. The mass was dull on percussion; no fluctuation elicited.

At operation under gas-oxygen-ether anesthesia the abdomen was opened through a left para-rectus incision revealing the mass to be a tumor of the transverse meso-colon; the transverse colon was flattened, curving over its top. The tumor was firmly attached posteriorly. After a rather tedious dissection I succeeded in removing the tumor, but the meso-colon being so intimately attached, I was compelled to remove 20 C.M. of the colon. The severed ends of the gut being brought out of abdominal wound

and anchored double-barrel fashion, with clamps attached as advocated by Rankin; wound closed up to clamps in usual manner. Convalescence was interrupted by an infection of the abdominal wound and the development of an abscess of the parotid gland. This cleared up after incision and drainage. Six weeks after first operation I performed an end to end suture anastomosis of the colon. There were no complications following this operation. She left the hospital at the end of 3 weeks in good condition. At present she is in good health, with normal bowel function.

The pathological report is as follows:

Surgical Tissue. Microscopically: The specimen consists of a firm, rounded, smooth, at least partially encapsulated tumor. To it is attached at least 20.0 cm. of apparently normal colon, the mesenteric attachment of which appears to envelop both tumor and intestine. The tumor weighs 1820gm. It measures 17.0 x 15.0 x 15.0 centimeters. On section, the tumor is grayish pink in color, relatively avascular, and has a washed silk appearance.

Microscopically: The tissue is composed of fibroblasts and fibrous connective tissue of varying stages of maturity. Near the center of the tumor, the fibres are least developed and most immature. Mitotic figures, however, are scarce. The blood vessels of the tumor, while not large, are apparently mature and complete. The outer portion of the tumor is composed of condensed, mature collagenous fibres that together form a kind of pseudocapsule. I do not find evidence of malignancy. Neither are there found nerve fibres. The tumor appears to be an unmixed fibroma.

Diagnosis—Massive Cellular Fibroma of meso-colon.

Discussion on Paper of Doctor Weaver

DR. GEO. A. TRAYLOR, Augusta: Reports of rare diseases are of value when the condition is so uncommon that its differential diagnosis is questionable. Doctor Weaver's interesting experience falls within this category.

Mesenteric growths are probably encountered oftener than reports would lead one to believe. Cysts are said to be more common than solid tumors. Cysts may be chylous haemorrhagic, echinococcus or dermoid. Any type of solid tumor may arise in the mesentery, lipomata being more often observed while fibromata are least frequent. It goes without saying that primary or secondary malignancy should always be kept in mind.

The origin of mesenteric new growths is as shrouded in mystery as is the etiology of tumors and cysts elsewhere. Embryologically, remnants of the Wolffian or Mullerian ducts, and the genital glands may become lodged in the mesentery and from these rests a tumor or cyst may arise. In addition they may originate from the intestinal wall, may be detached fibromyomata of the uterus, or may grow in situ from the tissues of the mesentery. The latter seems more likely. The inflammatory nature of some of

the cystic growths is a possibility that seems not to have been stressed.

Mesenteric new growths are lacking in a well-defined clinical picture, though a correct pre-operative diagnosis has been made in a few cases. It is likely that such abdominal tumors may be present for years before producing symptoms. The following signs are stressed by those of experience: pain, great mobility of the mass, especially in a transverse direction and around a central axis; and the presence of a zone of resonance around, and a zone of tympany in front of the tumor (Sir Wm. Osler). They are usually confounded with tubercular peritonitis of the ascitic type, ascites, hydatid and ovarian cysts, wandering fibromyomata of the uterus, and enlarged mesenteric glands. One report of an orange-sized calcified mesenteric gland is in the literature. However, exact diagnosis is not necessary as the condition is a surgical one. In attempting surgical intervention one should be equipped for intestinal resection, as quite often the blood supply to the intestine will be so compromised in the removal of the growth that gangrene will result. Professor Von Mikulis taught that some of the larger complicated cysts that could not be extirpated could be marsupialized. It would seem that the advice given by Dr. Miles F. Porter in 1906 is good today: "The treatment consists in the removal by that technique which seems best adapted to the case in hand after it has been studied through the open abdomen."

DR. GEORGE W. FULLER, Atlanta: I would be interested to know what Doctor Weaver's preoperative diagnosis was in this case. There are certain interesting things, and that is one of them. I think the most fun we get out of these cases is the diagnosis of them, letting the expert clinicians and diagnosticians get a shot at it and make them write it down.

Another very interesting thing in reference to handling these tumors is the removal of them. Just as Doctor Weaver has stated, removing them without a destruction of the mesentery circulation is very difficult and can very seldom be accomplished. Certainly in cases of cysts this can be handled a great deal better than with a solid tumor. In investigating a tumor, it, after getting into the abdomen, should be first seen if you can remove it without injuring the circulation. If that cannot be done, if there should be a cyst, I think there should be an effort to peel out the inner lining of the cyst, and in that way preserve the circulation. About two weeks ago I ran into a case of this nature. However, it turned out to be a cyst, but the handling of it was almost the same. It was a man seventy years old with a tumor in the right upper quadrant, and it happened to be in the transverse colon, as in Doctor Weaver's case. This tumor was about the size of an ordinary kidney. We put down all kinds of diagnoses. The nearest I could come to it was to say it was a retroperitoneal growth. We were able to excise it without doing much damage to the circulation, but it was debatable

whether the nourishment would be maintained, and I was careful to observe it for several days, and the patient has had a very satisfactory recovery. We have not seen a pathological report, but I do not believe it is a malignant growth.

DR. OLIN H. WEAVER, Macon: (closing) I thank Doctor Traylor and Doctor Fuller for their discussions. I did not undertake to enter into the etiology and diagnosis of this growth as did Doctor Traylor. I thank him for it.

As to Doctor Fuller's question I will say that my diagnosis was fibroma of the mesentery. I had read Doctor Summers paper a week previous to this case coming under my observation and I was so impressed with it that when my case presented itself, and I had determined from the physical examination that it was a solid growth. I made the diagnosis of fibroma of the mesentery. Of course, my diagnosis was partly a guess but I had Doctor Summers case as a hunch, so I give Doctor Summers due credit for the diagnosis.

NEUROLOGIC HAZARDS OF SPINAL ANESTHESIA*

WILLIAM A. SMITH, M.D.

Atlanta

In recent years the subarachnoid injection of anesthetic drugs for surgical analgesia has become a frequent procedure. It has also been used for diagnostic nerve block preliminary to lumbar sympathectomy and chordotomy, and for relief of gastric crises¹, and other pains. Thousands of cases without damage to the nervous system have been reported. Babcock² reported its use eleven times in one patient, and Sullivan³ described a patient with ureteral stone having been given spinal anesthesia five times within thirty-eight hours, without ill effects. However, occasional neurologic disorders have occurred, and at times have been permanent if not fatal. The frequency of these disorders is probably greater than the literature indicates. To temper enthusiasm for what some may consider a simple method such possibilities should be recognized.

The physiologic action of the anesthetic is accepted to be a blocking of the sensory fibers of the posterior nerve roots. Novocaine has a special affinity for sensory nerve fibers in the following order: Pain, cold,

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warmth and touch. Thus pain may be abolished, but touch and kinesthetic senses be preserved. Gasser and Erlanger⁴ have shown that this order varies inversely with the size of the respective fibers. With larger doses, kinesthetic senses are affected. According to Willinsky⁵, all effects, including muscle flaccidity and loss of reflexes can be ascribed to the dorsal roots alone. Fall in blood pressure occurs through blocking of the sympathetic rami⁶, and is counteracted by ephedrine. Only with larger, toxic doses does true motor paralysis occur.

Careful studies of neurologic phenomena following the injection of the newer drugs have been made by Lindemulder⁷ in eleven cases. He found that patients first noticed subjective numbness in the lower extremities; then followed a loss of sensation to pain, heat and cold up to the level of the lower thoracic segments; in one case, the anesthesia reached up to the second cervical segment. There was impairment of muscle sense in two, and vibratory sense in two others. The tendon reflexes in the lower extremities were lost for almost six hours; there was no motor paralysis in the legs. At six hours, all sensations had returned. A Babinski reflex, indicating pyramidal tract irritation was present in six; in four cases this had disappeared within two weeks, but persisted even longer in the other two.

The effect on the spinal fluid varies. Iason, Lederer and Steiner⁸ in a study of thirty-one cases twelve hours after operation, found an increased cell count in eleven; in four, the cell count was over two hundred per cubic millimeter, the highest being eight hundred and chiefly lymphocytes. In twenty of the cases there was an increased amount of glucose in the spinal fluid; no other changes were noted. While there were mild nervous symptoms following operation in thirteen of the patients these could not be correlated with any spinal fluid changes.

Experimentally, Spielmeyer⁹ in 1908 found that the spinal injection of stovaine in dogs and apes, produced a toxic degeneration of the nerve roots and peripheral portions of the spinal cord, without any evidence of hemorrhage, softening, scarring or inflammation. There were also retrograde changes

in the ganglion cells of the anterior horn, and these latter changes were the only ones found in sixteen human cases.

Pitkin¹⁰ found that injection of 5 per cent stovaine in dogs caused degeneration changes in the cord, while 5/20 per cent novocaine did not. Davis et al¹¹, however, in a study of the newer drugs in thirty-seven dogs, found that large doses produced tonic spasms of the fore-limbs, hyperpnea and complete paralysis and anesthesia of the hind-limbs. Doses comparable to that used clinically produced hyperpnea, with complete anesthesia but only partial paralysis of the hind-limbs. Pathologically in all cases, there was an aseptic meningeal reaction with lymphocytic infiltration, and at the end of ninety days, thickening and fibrosis. There were moderate ganglion cell changes in all cases, but after ninety days, these had become restored to normal. The spinal cord also showed some peripheral myelin destruction and axonal changes of transient character. They demonstrated that incubation of spinal cord in a solution of anesthetic in physiologic saline for eighteen hours was followed by myelin destruction in vitro, while incubation in physiologic saline alone was not. This proves that the anesthetic solutions are potentially myelolytic. Although Babcock¹² rejects such animal experiments as inapplicable, and Bower¹³ states that spinal puncture in the dog cannot be done without injury to the cord, spinal puncture alone did not produce any symptoms or lesions. Lundy and Essex¹⁴ also found that administration of large doses of procaine to dogs to produce paralysis caused a peripheral degeneration of myelin in the spinal cord, while injection of saline produced no permanent injury. They found no changes in the nerve roots or cells.

It would seem from these results that some degree of meningeal reaction with transient cord changes occur in all cases, the cord lesions usually being reversible, and without clinical manifestations.

The most common sequel to spinal anesthesia is headache, which Koster and Weinthrob¹⁵ found to occur in about 20 per cent of cases. In most instances, this appears in about twenty-four hours, is relieved in the recumbent position, and is due to hypotension of cerebrospinal fluid, consequent upon leakage at the site of puncture, such as may follow simple lumbar puncture. Leriche¹⁶ has made interesting observations of such leakage in patients punctured during laminectomy, with the exposed dura under observation. On exposure some days after puncture, he has found as much as 20 cc. of fluid between the muscles and dura. This type of headache is not considered of serious import.

and may be relieved by mild sedatives, recumbency and forcing fluids. If severe, the injection of hypotonic fluids intravenously or pituitrin or ephedrine intramuscularly may give relief. It usually lasts only a few days. Koster advised as preventive measures careful puncture, keeping the head low, forcing fluids preoperatively, and avoidance of injection of air.

More serious is the delayed headache, which may not appear for several days, is not relieved by the recumbent position, but is more severe, accompanied by rigidity of the neck and pain in the back. In many of these cases the spinal fluid is under increased pressure and may show an increased cell count. In these cases spinal puncture, catharsis and diuresis or intravenous injection of hypertonic solutions may be used.

Occasionally within a few days to three weeks, such patients will develop an ocular palsy, associated with diplopia and dizziness. In a review of eighty-eight cases of ocular palsy, Blatt¹⁷ found four cases of trochlear palsy, six cases of oculomotor palsy, and seventy-eight cases of abducens palsy, of which eighteen were bilateral and sixty unilateral. While most of these cases clear up in several weeks, some have persisted as long as seventeen months¹⁸. There may be corneal anesthesia; in a patient of Lindemulder's a corneal ulcer developed. Rarely a papillitis with amblyopia has occurred. Koster in a review of the literature found the frequency of ocular palsy to be one to five hundred cases; Stabins¹⁹ had one in one hundred cases; Biggam²⁰ saw six cases within a period of six months; Babcock² has had no cases in fifteen thousand anesthetics during the past eighteen years. They were more common with stovaine but have also occurred with the newer drugs. The ocular palsy probably depends upon an aseptic meningeal inflammation, with congestion and edema. The cause of this reaction is uncertain. Babcock believes that it depends upon faulty technic, as injection of foreign material. Blatt ascribed it to a peculiarity of the patient, as a previous central nervous disease. Angelesco and Tzovaru²¹ believe that complications are infectious and result from an upset in the meningo-vascular barrier following the anesthesia, especially in operations on a site of latent or manifest infection, such as appendicitis. They argue that the increased meningo vascular permeability would admit an attenuated infection of the nervous system. The experimental studies suggest a toxic origin.

A true infectious meningitis has occurred in nine cases¹⁵. Some of these followed operation on a septic lesion. However, Koster re-

ports using spinal anesthesia in thirty patients with positive blood culture, without neurologic complication. Angelesco reported a case of tuberculous meningitis following operation on a tuberculous knee, but this was not likely a result of the anesthesia. Rigid asepsis should prevent meningitis.

Lesions of the cauda equina and other nerve roots may also occur. This may be due to trauma during puncture, or toxic reactions may occur with the production of pains in the legs, disturbing subjective sensations, sphincter disorders and paralysis. These symptoms usually disappear within a few weeks. Occasionally, however, they are more persistent. In regard to sphincter disorders, Koster states that only 10 per cent require catheterization, and in 90 per cent of these only once or twice, but mentions one case requiring catheterization for a year. Devaigne Suzor and Laennec²² reported a case of flaccid paralysis of all extremities with anesthesia and lost reflexes lasting for eighteen days. Boisseau²³ has reported an unfortunate result in a young woman, in whom there developed severe lancinating pains in the perineum, anal canal and genitalia, difficult micturition and anesthesia of the lower four sacral roots still persisting after twenty-two months, and resistant to all forms of therapy.

Injuries to the cord have been rare. Koster cites a case of fatal paraplegia following injection between the 11th and 12th dorsal vertebrae. Babcock¹² states that the danger of injection above the lower end of the cord has probably been greatly exaggerated, but most neurologists will continue to caution against this. Nonne and Demme²⁴ reported a case of degenerative myelitis following spinal anesthesia for herniotomy, with paralysis of the lower extremities, sphincter disorders, decubital ulcer and anesthesia below the 5th dorsal segment, lasting 16 months when death occurred from urinary infection. At necropsy the meninges over the lower cord were found thickened and infiltrated, and the posterior half of the lower segments of the cord were necrotic. There was no evidence of mechanical injury or inflammation. MacLachlan reported two cases of disseminated encephalomyelitis following stovaine anesthesia. In one case, a woman operated upon for fibroid uterus, the patient developed flaccid paralysis of all extremities, double vision and delirium; she was still bed-ridden after twenty months, with paralysis of the legs, partial paralysis of the right arm and poor sphincter control. The second case (herniotomy) after six months still showed weakness of the legs with exaggerated tendon reflexes and a crosby findings in two cases in which there was meningeal congestion and edema, and in

Babinski reflex. Lindemulder reported neone case myelin degeneration in the lower cord. Michelsen²⁹ also reported four cases with spastic paralysis following anesthesia, in which no fluid could be obtained on lumbar puncture. In two of these cases necropsy showed marked thickening of the meninges, with adhesions to the cord. A case of rather severe "myelitis" with symptoms still present three years following spinal anesthesia is presented below:

A white male, aged 27 years, was seen on January 3rd, 1933 complaining of weakness and numbness of the right leg, sexual impotence and occasional rectal and urinary incontinence. He had been in good health until February 27th, 1930, when he was seized with an abdominal pain, and an acutely inflamed appendix was removed. Spinocaine was injected between the 2nd and 3rd lumbar vertebrae. He remained in bed seventeen days. When he got up he noticed numbness in the right leg, from the hip down, and difficulty in walking. There was marked patellar clonus, and he had to hold the knee stiffly to prevent giving way. He also found that he had sexual impotence, with occasional urinary and rectal incontinence. Six weeks after the operation he developed severe lancinating pains in the lumbosacral region, which were worse when lying down at night, and continued for six months. Since the onset, his symptoms had gradually increased. The family and past histories were unimportant.

The neurological examination showed highly exaggerated reflexes in the lower extremities with marked patellar clonus and a Babinski reflex on the right side. The right cremasteric reflex was lost. There was impairment of tactile, pain and temperature senses up to the ninth dorsal segment. Kinesthetic sensations were intact. Other neurologic and physical findings were normal. The spinal fluid was under normal pressure (80 mm. water), and there was no subarachnoid block. The cell count, globulin, gold curve and Wassermann reactions were normal.

The findings were those of an incomplete transverse "myelitis" at the ninth dorsal segment. No etiologic factor could be found, other than its appearance soon after administration of spinocaine, three years previously.

Several authors suggest that some effort should be made to exclude disease of the nervous system before proceeding with spinal anesthesia. One could conceive of serious results following such a procedure in case of intracranial tumor, although no such cases have been reported. It is not certain if complications are more frequent in those with

neurologic disorders, but such an examination would be of value in the diagnosis of subsequent neurologic developments. Young²⁷ in 527 cases found a positive Wassermann reaction in the spinal fluid in eighteen; in only two of these was the Wassermann reaction also positive in the blood. A significant case is reported by Michelsen²⁹ in which severe motor and sensory disturbances developed in the lower extremities following spinal anesthesia; after a period of improvement, symptoms again became exaggerated three and a half years after the anesthesia; operation then revealed an adhesive meningitis and a spinal cord tumor (cholesteatoma). Manometric tests preceding the anesthetic injection might have revealed some blocking in the spinal fluid circulation.

It is doubtful if this is a good method of anesthesia for psychoneurotic individuals. Recently a patient has been seen with a typical hysterical anesthesia and paralysis in the legs, ascribed to spinal anesthesia; symptoms did not develop until six months after the anesthesia. Another patient was seen in whom a schizophrenic syndrome developed soon after a spinal anesthesia. Many individuals fear even a simple lumbar puncture, and this psychic factor as well as the possible anxiety during operation must be given consideration.

In conclusion it has been experimentally and clinically demonstrated that spinal anesthesia may be followed by neurologic disorders. These include mild meningeal reactions, at times associated with an ocular palsy, spinal root lesions, more severe meningeal inflammation with adhesions to the cord, and rarely, degenerative lesions of the spinal cord. The experimental evidence is in favor of these lesions being toxic in origin. In rare instances, the appearance of nervous symptoms due to other causes, both organic and psychic, might be predicted by a neurologic examination before anesthesia, and the surgeon would be wise to use another method in patients having nervous diseases. The opportunity for spinal fluid study at that time should also not be neglected.

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Discussion on Paper of Doctor Smith

DR. CHARLES H. RICHARDSON, Macon: One interesting thing about spinal anesthesia is that it keeps coming up. When we think we have it settled we find it has broken out in another place. Leriche has said that it has been the misfortune of spinal anesthesia that it has never interested the physiologists. So far as I know, until this morning apparently it has not as yet interested the neurologists.

I think this is a very interesting and timely paper. It is well to temper, as the essayist said, one's enthusiasm about a procedure simply because it furnishes satisfactory operative work.

I prefer to discuss this question from the physiologic standpoint. When a substance such as novocain is introduced into the subarachnoid space, undoubtedly some of it is absorbed into the substance of the cord. What happens to that individual when that introduction is made? We get a fall in blood pressure almost immediately, which amounts in some instances to as much or more than fifty per cent of the total systolic reading. We get an embarrassment and sometimes a respiratory collapse. We have felt that the drop in blood pressure was due to the paralysis of the nerves in the splanchnic system. That has

just been accepted, until Doctor Ferguson and North, at the Research Department of the University of Pennsylvania, did some very interesting work. They took some dogs and did laminectomies on them, and introduced a solution of novocain which had been colored with methylene-blue, where it could be seen, and they found that there was quite a diffusion of the solution, even at times up to the cervical segments.

Their experiments have proved rather conclusively that the drop in blood pressure which occurs following spinal anesthesia is not due to the paralysis of the splanchnic nerves alone, because they sectioned the splanchnic nerves and got the same blood pressure as before. They found the drop in blood pressure was directly proportionate to the height of the cord segments involved. And they proved rather conclusively that there not only occurs a paralysis of splanchnic fibers, but also a paralysis of vaso motor fibers, which go to the somatic segments, to the lungs, and to the upper extremities. They proved that the slowing of the pulse rate is due to the paralysis of the accelerator fibers to the cardiac muscles which run, as we know, in the sympathetic nerve. They also proved that the respiratory embarrassment was due to the paralysis, first through the dorsal segments of the muscles of respiration, and that if this solution diffused high enough to involve the phrenic nerve, respiratory collapse was complete and death would ensue.

DR. GEORGE W. FULLER, Atlanta: Mr. Chairman and Gentlemen: We are indebted to Doctor Smith for bringing this subject before us today. It is timely because of the prevalent use of spinal anesthesia today all over the world. We should be reminded that there are neurological hazards in its use, and that we should be ever careful to prevent any accidents when possible.

The object of this paper was to point out the disadvantages and the hazards of spinal anesthesia, and after listening to the contents of the paper one would be inclined to feel that this method should be eradicated to the dump heap on account of its danger. We must remember, however, that these sequelae have been culled from thousands of anesthetics, and that it is not a frequent thing, but indeed there is a small percentage of damages that we get in this way.

We have recently counted the anesthetics given in one operating room alone in Atlanta and we find 1727 spinal anesthetics used there in the last four and a half years, and this case that Doctor Smith has reported is the only neurological hazard yet reported.

Doctor Smith states that headache is the most common sequel of spinal anesthesia. This might have been quite true and might have given lots of bother with the older methods and the older preparations, but I think the time has come now to quit stressing this point. I don't think it is worth anything to mention it any further. It is very difficult for me to detect any difference in those headaches from the

ones occurring with other anesthetics, and I am honest in saying that.

I am at a loss to say just what happened in this case which Doctor Smith reported today. I am inclined to feel it was a faulty technique, but it may possibly be due to a sensitiveness of the patient to novocain. In one case, after giving 900 milligrams of novocain, we were not able to get enough anesthesia for operation, while 100 milligrams is often sufficient for laparotomy.

I don't think we should leave the impression that the use of spinal anesthesia is without danger, but at the same time if we are careful to develop our technique and use every precaution to prevent accidents, if it is used properly and with discretion, I believe it is one of the safest and best anesthetics that we have today.

DR. PAUL L. HOLLIDAY, Athens: A few years ago I was quite an enthusiastic advocate of spinal anesthesia, but a few months ago I had a very unfortunate experience following an operation for acute appendicitis in which spinal anesthesia was used. The patient was a young man thirty-five years of age who had been an alcoholic addict but had not drunk any for several months. Examination of the patient revealed nothing except the usual signs of appendicitis and blood pressure of 190. I thought this would be an ideal case in which to use spinal anesthesia. Neocain was used and as you know it is supplied in vials containing the proper dosage. Spinal puncture was done between the second and third lumbar vertebrae and clear spinal fluid obtained which was used to dissolve the crystals of neocain. The fluid was reinjected with very little force and no pumping back and forth of the syringe. The patient voided in the afternoon following the operation and seemed to be doing nicely. The next day he complained of severe headache, stiffness of neck, and could not move his legs. He also had to be catheterized. The blood pressure had risen to 230 and he had a complete paraplegia from his waist down. A spinal puncture was done and about 20 c.c. of what appeared to be pure blood was withdrawn and this was repeated daily until the spinal fluid became clear, however, there was no improvement in the paralysis. He was kept under observation for several months and then transferred to a government hospital where he finally died of septicaemia resulting from bed sores and infection of the urinary tract which occurred soon after the paralysis in spite of scrupulous care of the nurses and the use of bladder irrigations.

Not long after seeing this case an article appeared in the A. M. A. Journal reporting a series of cases from the Philadelphia General Hospital in which the author found at autopsy changes in the spinal cord similar to those occurring in the brain following hemorrhage. Disease of the blood vessels supplying the cord was found which the author believed was the primary etiology. My conclusion in my case was that the blood vessels of the cord were diseased from

the use of alcohol over a long period of time and that the spinal anesthesia caused rupture of one of the spinal vessels. Instead of being an advocate of spinal anesthesia as I was several years ago I think it should only be used when other anesthetics are absolutely contraindicated.

DR. C. F. HOLTON, Savannah: I am indebted to Doctor Smith for his review of the situation, as I have been interested in spinal anesthesia and have used it several hundred times. I think an important thing about spinal anesthesia is the selection of cases. I think a person with nervous history should be excluded.

In my series of cases I have seen only one unfortunate result of spinal anesthesia, and that could have been avoided by more careful history. A man had a simple operation under spinal anesthesia, and went crazy. But in investigating the history later, I found out from his sister that this man was subject at various times in his life to becoming religious and having religious delusions. That is the only case in which I have seen a serious consequence.

In the colored hospital in Savannah a large proportion of the cases are syphilitic, and they are all people of low mentality. I have never seen any serious consequence from a spinal anesthesia in a colored person.

As to the headache, we don't have them any more. We used to get a few headaches that might last a few hours. I have not seen any headaches for a number of months. The worst headache I have seen was a man on whom I made a simple spinal puncture to see whether or not he had a positive Wassermann.

DR. L. G. BAGGETT, Atlanta: I think it is very timely that a neurologist would give us a paper regarding the neurological after effects of spinal anesthesia. While I have all the respect in the world for the men who use it, I must admit that it carries its dangers and some very grave dangers. I admire the good results of my good friend, Doctor Fuller, and want to give you the history of a case that I had some time ago. I was taking issue with a certain man in Atlanta about the bad effects of spinal anesthesia. He said: "I have given 400 without a bad result."

I said: "I have a hysterectomy tomorrow morning and want you to give it for me."

He gave it for me, and for two months thereafter I had to make daily visits to that patient. She had pains down her leg, and I think it was due to the spinal anesthesia and not due to faulty technique.

Another case was a man who was a habitual drinker. He has never gotten over the effect, we think, and he and his family think so. While I am not condemning it entirely, I am convinced that it should not be the general choice so far as general anesthesia is concerned, but should be used in selective cases only, and I am glad to say I can operate just

as well, with good results, by other methods. I have a perfect right to say what I am saying, because I did not give these.

DR. WILLIAM A. SMITH, Atlanta: (closing) I appreciate this discussion very much. The headaches, as I said, were of no serious import, and I wanted to stress the root lesions, the proven cases of meningeal adhesions to the cord and spinal cord lesions. Although these complications may be infrequent, the individual case is no less embarrassing to the surgeon when it occurs.

The surgeon should consider these possibilities before deciding to use spinal anesthesia.

VESICAL CALCULI*

RUDOLPH BELL, M.D.
Thomasville

Stones in the bladder may be primary or secondary: Primary when the calculus forms in a bladder which is the seat of a chronic cystitis, with alkaline urine; secondary, when the stone has descended from the kidney or one of the ureters.

It may be stated with considerable emphasis that most all of the stones found in the bladder have come originally from the kidney. If the bladder has been the seat of a chronic systitis, and if there has been considerable ammoniacal decomposition of the urine for a fairly long period of time, the stone is quite likely to take its origin in the bladder by precipitation of phosphates, and in this case inspissated mucus often forms the nucleus.

In considering the variety and frequency of vesical calculi, I should like to quote Sir Henry Thompson's analysis of: (a) 977 calculi in male adults:—of this number 551 were uric acid, 244 phosphates, 92 uric acid and phosphates, 35 oxalates and urates, 34 oxalates, 18 oxalates and phosphates and 3 cystine. (b) 14 calculi in female adults:—10 uric acid, 2 uric acids and phosphates, 2 phosphates. (c) 16 calculi in children:—10 uric acids, 3 urates and phosphates, 1 oxalates, 1 oxalate and urate, 1 phosphate.

Uric acid calculi are smooth, round or oval, and hard but easily broken. On section they present the color of brick-dust and are marked by concentric rings. Their nuclei are dark by comparison. They are soluble in dilute potassium hydrate and in nitric acid. Urate stones are not in rings, are not so hard as the uric acid stones, and are fawn-colored on

section. Oxalate calculi or mulberry stones, are round with many projecting nodes like the mulberry. They are very hard, and section shows the color to be brown or green and that they possess wavy concentric rings. This form of calculus is soluble in hydrochloric acid. The phosphate stone is light, soft, smooth and white and shows no laminae on section.

A stone having layers of different substances may be formed; for instance, there is often found a uric acid nucleus surrounded by phosphates, the latter surrounded by some uric acid or urates, and these again by phosphates.

Vesical calculus in the female is a rare complaint. The short and easy dilatable urethra in the female allows many stones to pass out of the bladder. It will be remembered that, in the case of renal stone, both sexes are about equally affected.

Anything that favors the formation of an excessive urinary deposit may cause vesical calculus, and among such causes are defective digestion, failure in processes of oxidation, excess of solids and nitrogenous elements in the diet, deficient exercise, bacteria and temperature. In considering temperature I should like to quote Mr. Campbell Begg's discussion on the paper of Hager and McGath: "While campaigning in Mesopotamia, I had to find some sort of treatment for the Arabs inhabiting the Northern part of Asia and the region around the upper Euphrates. The effect of dehydration and of climate on the formation of stone is very marked. In that country we had temperatures measuring 127° F. or more in the shade. The problem there was to keep the body temperature as nearly normal as possible when the outside temperature is more than 130° F. The only way that this could be done was by getting sufficient evaporation to reduce the body temperature to normal. In case of heat stroke, the temperature of our men and the Arabs would often shoot up to 112 and 115° F. The affect of this temperature on the excretion of urine is readily surmised, and in that country the kidneys practically cease functioning. When one got up in the morning there was no thought at all of urinating. I think that this function was rarely performed more than once in 24 hours, and then there was a very concentrated excretion. I should say that fully 50 per cent of the population had vesical calculi.

The severity of the symptoms of stone in the bladder depends more on the roughness of the stone than on its size. A small, rough

*Read before the Thomas County Medical Society, Barwick, Georgia, September 22, 1932.

calculus will produce intolerable anguish, whereas several large, smooth stones will cause but moderate pain. A patient with stone in the bladder complains of frequency of micturition, particularly in the daytime, the desire being sudden, uncontrollable, and invoked or aggravated by exercise. This symptom is more positive in youth than in old age. Pain of a sharp, burning character is experienced at the end of micturition, due to the contraction of the empty bladder upon the stone or stones. It disappears gradually as urine enters and distends the bladder. The usual seat of this pain is the under surface of the head of the penis, a little behind the meatus, and the pain may continue for some time. By pulling on the penis to relieve this pain the prepuce of a child may become pendulous. Stone in chronic cases of atony and in cases of vesical paralysis causes neither marked pain nor frequency of micturition. In case of enlarged prostate, pain *precedes* the act of micturition. In urethral stricture it *accompanies* it, and in stone, as already stated, it *follows* it. Hematuria may or may not be noted; it is most usual after exercise, and occurs at the end of the urinary act, the first urine passed being clear, the later urine being bloody, and at the end of the act some drops of pure blood emerges. Blood appearing between acts of micturition comes from either the urethra or prostate. Pain of a reflex nature may be felt in the rectum, in the perineum, or in some distant part.

The above symptoms, even if all are present, do not prove that an individual has a stone in the bladder. To prove the presence of a stone the object must be pictured by the x-ray, seen through the cystoscope, or touched by a sound. Sounding of a patient is very unsatisfactory, as this contact must be felt and heard. If the stone is in a diverticulum or behind a large prostate it is very likely that it will not be detected by sounding.

When a stone is once formed, it is an idle dream to think of dissolving it. An operation must be done.

Of the operative procedures for vesical calculus Fryer states that litholapaxy is the operation of choice.

While then, giving the preference to litholapaxy, he considers that the following conditions are inappropriate for litholapaxy, and are best met by the operative methods mentioned: (a) very large, very hard calculi, approximating 2 ounces and over, suprapubic cystotomy; encysted calculi, suprapubic cystotomy. Some authors recommend suprapubic, while others recommend perineal. The suprapubic seems to be more in demand.

Case Report. A minister, age 58, reported to his family physician May 13, 1932, complaining of severe pain in the region of the rectum and perineum and passing pus immediately following the act of micturition, and that this condition had been growing gradually worse for several weeks. A vesical stone was suspected and an attempt made to sound the patient; this was unsuccessful due to previous strictures of the urethra, which had caused its lumen to become narrowed and its walls scarred.

Not being afforded any relief the patient reported to me at which time I attempted to pass a sound into the bladder, but found several false passages in the urethra. I immediately took the patient to the hospital and did a suprapubic cystotomy under spinal anesthesia. An oval-shaped phosphate stone the size of a golf ball was removed from a diverticulum lying over the vesical orifice. Not being able to insert a self-retaining catheter through the urethra by the ordinary procedure, I maneuvered a stone crusher through the urethra into the bladder and caught the distal end of the catheter through the suprapubic opening and brought it down into the urethra. A self-retaining catheter was inserted in the bladder through the suprapubic opening. The urethral catheter was removed ten days later at which time the patient voided and has no extravasation of urine. Two days later the catheter was removed from the suprapubic wound and the patient allowed to go home the following day with instructions to report to my office two weeks later for urethral dilatation.

He has not reported for the dilatation, but writes that he is free of all previous symptoms and that he urinates without any trouble.

Summary

(1) Neither age nor sex exempts an individual from vesical calculus, although it is much more common in male adults.

(2) Hypertrophied prostate, and urethral stricture must be differentiated from vesical calculus.

(3) A definite diagnosis of vesical calculus cannot be made without x-ray, cystoscope, or felt and the contact heard by sounding.

(4) Helpful method of inserting catheter into urethra in complicated cases.

The medico-military course of inactive duty training for Medical Department Reserve officers, which has been held at the Mayo Clinic during the past four years, will again be held this year from October 1st to 14th, inclusive. Application for this course should be made to the Corps Area Surgeon, Seventh Corps Area, Omaha, Nebraska.

This short course is equally applicable to general practitioners and those who limit their practice. Each applicant is invited to take the course of study without charge.

ARTIFICIAL PNEUMOTHORAX*

J. A. REDFEARN, M.D.

Albany

Artificial pneumothorax should be available in all sections of Georgia, certainly for refills, because the average patient cannot be kept longer than six months at Alto before having to vacate in favor of some of the hundreds on the waiting lists. Then, too, many private patients may be spared great financial sacrifice that they can ill afford after spending several months in a private institution.

Bed rest is sufficient in many cases of pulmonary tuberculosis when found early. In some, after two months, it will be noted that the disease is progressing, thus showing poor resistance. Localized rest to the lung becomes advisable in order to assure recovery. The simplest and easiest method of collapse is artificial pneumothorax. It is accomplished by introducing filtered air into the pleural space, two or three hundred cubic centimeters every two to five days until the lung is collapsed. It will be partial or complete depending upon whether adhesions are present. If no adhesions are present a good collapse will result in three or four weeks. The time between refills is gradually lengthened until every two or three weeks will be often enough. The cough and expectoration may be increased by the first few treatments but both will lessen and cause little annoyance afterwards. There is less absorption of toxin through stasis due to lessened lymph flow. Diminished oxygen supply reacts unfavorably on the bacilli. Naturally the weakened area collapses first, thus forcing together the walls of cavities and hastening healing. Temperature soon subsides, sputum becomes scanty and negative, appetite improves, weight increases and a hopeful attitude results. Artificial pneumothorax is usually used when tuberculosis is present in only one lung. However, it may be used when the good lung shows some scarring or slight involvement which is apparently arrested. Partial collapse of both lungs may be advisable. Collapse is contraindicated in bilateral kidney involvement, ulceration of bowels and decompensated heart disease.

Before beginning treatment explain to the patient the procedure in order to allay fear and get cooperation. Choose a point of entry as far away from the diseased area as possible. The anterior axillary region in the fifth or sixth interspace is quite satisfactory.

The patient is placed on his good side with a hard pillow under the chest to separate the ribs. Sterilize the skin and introduce 2 per cent novocain intradermally and then deeper with a number 26 needle. Now change to an 18 or 20 gauge, one and one-fourth inch, blunt pointed needle. Use novocain freely and there will be practically no pain. When the needle enters the pleural space the manometer will register a rather widely oscillating negative pressure. Never permit any air to enter until this has been accomplished. Now let in 50 c.c. which should flow freely without pain or discomfort to the patient. Cut off air and switch on manometer cock and again get widely oscillating negative pressure before letting in more air. Repeat the procedure several times always getting widely oscillating negative pressure and do not exceed 300 c.c. at any of the first three or four treatments.

Refills are accomplished generally without difficulty because as the blunt pointed needle enters the cavity, air is drawn into the novocain which is a signal to remove glass syringe and attach observation tube and proceed. Always avoid reaching much positive pressure. The procedure is carried out without difficulty in the physician's office within ten minutes, after which the patient may go about his affairs immediately. Pneumothorax treatments should be continued for six months to three years and sometimes longer.

One case is of particular interest because she is a negro, a charity patient, fed by the city of Albany and lives in a poor tenant section in the railroad yard. She has been brought to my office by the city nurse for all treatments which were begun three months ago. At that time she had a troublesome, productive cough, poor appetite; she was running a high fever, and looked very toxic. She has received twenty artificial pneumothorax treatments accompanied by bed rest. Her temperature is normal and she has practically no cough. The sputum scanty, negative tubercle bacilli. She looks much better and has a good appetite.

Up until a few years ago essential treatment of pulmonary tuberculosis was said to consist of:

1. Climate.
2. Food.
3. Rest.

It is generally agreed now that climate is of little consequence, thus leaving food and rest. It is my belief that food may be taken out and leave only rest because a balanced diet in sufficient quantity whenever possible is essential to both sick and well individuals. Rest implies rest to the diseased part and

*Read before the Eleventh District Medical Society, Waycross, April 11, 1933.

general body rest. I believe that under proper treatment the negro patient has just as much chance to recover as the white patient.

The remaining patients in this group have been taking treatment for more than two years from both private and state institutions. However, it is of interest to mention that the patient with miliary tuberculosis, who is a negro, has seemingly recovered because she is teaching school in an adjoining county.

THE PRACTITIONER'S UROLOGIC PROBLEMS*

WALLACE L. BAZEMORE, M.D.
V. H. MCMICHAEL, M.D.

Macon

The general practitioner, called upon for such varied advice, is as often confronted with trying urologic problems as with any other branch of medicine. He is not interested in the cystoscopic appearance of a tabetic bladder, nor is he interested in whether a bladder papilloma is one suitable for electro-coagulation or resection, but he must be alert to recognize the clinical symptoms that lead one to suspect such maladies. It is the general practitioner who first sees these patients, and it is with him that the responsibility rests. His advice is usually heeded. Thus one sharing such faith and responsibility, feels he must be aware of those symptoms that would lead him to suspect the more grave pathologic processes encountered in our specialty.

Briefly, we shall consider the more urgent urologic problems that will be of profit to our patients and to ourselves. The urinary organs are so situated that they are not readily accessible to the usual method of palpation and percussion, yet much is suggested by such procedure should they prove positive. Renal ballotment will often lead you to suspect renal or ureteral disease, when the clinical symptoms are more referable to abdominal lesions. Kidney angle tenderness means disease of the urinary tract, be the offending lesion at the external meatus, the bladder neck or the ureter. This finding is not a constant subjective symptom; it is the examining physician who locates it.*

Bimanual examination of the urinary bladder will often show an infiltrating carcinoma, it is hardly to be confused with any other type of bladder lesion. Percussion of a full bladder in the elderly male will reveal a nocturnal frequency of distention, not one of Bright's. So it is well, although

such measures are less adaptable to urinary organs, to avail ourselves of their diagnostic importance. These methods are so readily accomplished.

Pyuria and hematuria cannot, of course, be accounted for by these methods. I cannot use the word hematuria without insisting that it is a symptom of a grave disease, not a mere happening, and that it should be considered as such, and immediate steps be taken to classify it.

It is with pride that we find in a recent survey of our hemorrhage cases that in none was delay longer than ten weeks before cystoscopic and radiographic evidence was completed. It is the general practitioner who first saw the majority of these cases, and to him belongs the praise.

With pyuria we feel entirely different. It is a finding rarely requiring urgent diagnostic procedures. Should it resist the usual method of treatment, a more detailed examination is indicated. Just what time should be allotted for internal medication is arbitrary, but one must remember that many lesions, which in their infancy are amenable to minor procedures, should they be permitted to persist, terminate most disastrously to patient and physician alike.

The diagnosis "Cystitis," is rarely justifiable. It is simply the outcry of an inflamed bladder to some disease of the genital adnexa, or of a diseased kidney above. Cystitis alone rarely exists.

In clarifying our diagnosis in cases presenting themselves with blood or pus in the urine, the practitioner must attempt means as his experience and training suggest. Should such means be inadequate, more trained assistance must be counseled. Urology of today is not haphazard. Complete visualization of the urinary tract is possible, be it by inspection of the urethra and bladder, or by radiography of the entire tract. The tip of the meatus to the tip of the calyx can be accurately studied. Since the development of intravenous urography, this is true of all cases, including that small number not suitable for cystoscopy.

There are many steps in arriving at a diagnosis in urologic cases that may be done as well in a far away farmhouse as in a well-equipped specialist's office. These examinations are routinely carried out by the urologist, and almost invariably lead him to the correct impression in each case. You cannot foretell what the lesion is, but you are frequently able to foretell where the pathology is. Often, further detailed studies are merely confirmatory.

No elaborate equipment is necessary to discover a tender kidney angle or a large pal-

*Read before the Macon Medical Society, Macon.

pable mass in either flank. The full bladder does not always exhibit marked frequency, but percussion over this viscus, be it full, will always exhibit dulness, yet I have recently obtained nearly a quart of urine from a bladder that myself and a consulting doctor believed empty, possibly a bladder that was exceptionally low in the pelvis, but more likely a misinterpretation of the percussion note. The simple passage of a catheter—and here you exclude stricture—will measure the residual urine. Should this prove significant, a rectal examination will confirm your suspicions of a soft, rounded, symmetrical, non-malignant adenoma—the simple hypertrophy of old age. Rectal examination likewise excludes the hard, irregular prostatic growth, which may be malignant. Should the prostatic bed feel normal, an examination of the reflexes will often reveal findings that would lead you to suspect a possible paralysis of the bladder from disease of the spinal cord. Cystoscopy alone will show the middle lobe or the contracture.

Passing the urine in three glasses will suggest upper or lower tract lesions in cases with pus in the urine. Your patient should void in the first, second and third glass without checking the urinary stream. The urine contained in the first glass represents the mixed bladder urine, plus his urethral washings; the second glass represents his bladder urine, and the third glass as the second, plus the prostatic pus, which is forced out by the plunger-like action of the muscles at the end of urination. You should know if there is hesitancy, forcefulness, and should blood be present, it is all essential to observe if this bleeding is total or terminal. Terminal bleeding signifies an inflamed or ulcerated bladder neck. Total bleeding (and by total bleeding I have reference to blood and urine mixed at the time of voiding), excludes urethral disease. Thus you are able to glean a fair knowledge of your patient's condition by simple observations at the command of us all.

In the male, pyuria is often found to have its origin in the urethra or the genital adnexa. The ravages of gonorrhea are too often untold, and its stain is lasting. This self-limited venereal disease, commonly considered unimportant, reeks with abuse and neglect. But those of us who deal with it constantly realize that the treatment usually afforded the unfortunate gonorrheic, is far from desirable. We have no formula to offer you as an answer to this criticism. We can, however, assure you a more happy contact with your gonorrheics, if certain factors are ever foremost in your treatment.

To avoid complication in gonorrhea, is to assure yourself of a grateful patient, and

that feeling of reward for yourself of "well done." The one fact essential for this happy outcome is gentleness. No medication will succeed without it. The particular drug employed you may choose for yourself, provided you are aware of its characteristics. Our cabinets at present contain only four drugs for the treatment of gonorrhea. On days of despair (and they occur far too frequently), we have replenished them with varied additions. We have for several years employed argyrol, and with no regrets. As an injection, we are usually satisfied with the results obtained. Acriflavine, used by an experienced physician—never by the patient—is at times brilliant. We have not yet quite learned when not to use this drug. Its action on the gonococci is rather certain, but its action on the urethra is most uncertain. It is not a drug for experiments. Silver nitrate is an astringent of worth, and we employ it frequently toward the end of the disease, and at times with satisfactory results earlier. Permanganate of potash will, we believe, continue to hold its place in combating this disease. Keyes has suggested a formula for treating gonorrhea that we have used for two years with no misgivings. On the fifth day a straight sound of moderate calibre, say 22 French, is passed into the anterior canal. A few days later this is repeated, using a slightly larger sound. At the end of the third week, or thereabouts, a curved sound is passed to the bladder, ever so gently. The passage of the sounds are done regardless of how much pus is present. His formula has proved most helpful to us. We have felt that we at last had some tangible scheme upon which to work. Heretofore we had grasped in vain at too many methods and too many drugs in an attempt to check this disease. In the majority of cases we made no headway. Acriflavine will not cure all cases of gonorrhea, but we believe that it will come nearer curing more cases of this infection than any other drug that we have at our disposal.

As we learn the temperament of the individual urethras, (and we usually do within the first two or three days), we vary our strength and time interval accordingly. It is proving most satisfactory with us. Yet, within one short week we had four patients to develop arthritis while being treated along these revered lines!

Treating the chronically infected gonorrheal urethras successfully is absolutely dependent on knowing where the resisting focus lies, be it prostate or vesicles, or one or more of the numerous urethral crypts. The passage of gradually increasing sounds pro-

(Continued on page 318)

THE JOURNAL

OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

AUGUST, 1933

LABORATORY AID IN DIAGNOSIS OF TYPHUS FEVER OR BRILL'S DISEASE.

Endemic typhus fever, or Brill's disease, is rapidly assuming the proportions of a serious public health problem in Georgia. The following table shows how the disease has increased during the past five years:

Year	Cases Reported
1928	48
1929	57
1930	134
1931	127
1932	308

For the first seven months of 1933, the present year, 205 cases have been reported. The peak of seasonal incidence is usually reached in late summer or early fall.

While the clinical diagnosis of endemic typhus is not difficult in most cases, the physician who has had only limited experience with the disease is often puzzled, especially during the first few days after onset. Many cases are first diagnosed as typhoid fever. In fact atypical cases often resemble typhoid so closely, especially in the first week or ten days, that a definite differential diagnosis is difficult or impossible.

However, it is not the purpose of this paper to discuss the clinical aspects of endemic typhus, but to bring out the value and limitations of laboratory diagnosis.

There is one and only one laboratory test for endemic typhus or Brill's disease. This is the so-called Weil Felix test. It is an agglutination reaction similar in effect to the Widal test for typhoid. It does differ, however, in one rather interesting feature. In the Widal test for typhoid, the serum of the patient is mixed in varying dilutions with living or dead suspensions of the specific causative organism, the typhoid bacillus. If the patient has had typhoid fever for a week or ten days, the mixture of bacterial suspension and patient's serum will usually flocculate and settle to the bottom of the

tube. This test for typhoid fever is of limited value in that previous inoculation with typhoid vaccine or a previous attack of typhoid even years ago or certain non-specific factors may also cause flocculation and thus give a falsely positive Widal test.

In the Weil Felix test for typhus, however, the patient's serum in varying dilutions is mixed with living suspensions of *Bacillus Proteus* strain X 19 which is not the causative organism and which apparently has no connection with the disease. Yet in most cases of typhus of seven to ten days duration, the *Proteus* organisms when mixed with patient's serum will flocculate and settle to the bottom. The Weil Felix test seems to be specific for typhus although it, like the Widal test for typhoid, is subject to certain non-specific influences.

How to Submit Specimens

The laboratory of the State Board of Health is prepared to make the Weil Felix test for typhus as well as similar tests for typhoid, undulant fever and tularemia. All tests can be and frequently are made with a single sample of blood. The blood should be submitted in the Keidel vacuum tube such as is used for the Wassermann work. A full tube should be collected, but one-third full will usually suffice for all serological tests.

The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.

When to Collect the Specimen

Specific agglutinins usually do not begin to appear in the blood of a typhus patient until five to seven days after onset, and even then in such small amounts as to give only a doubtful or weakly positive test.

For the best results, therefore, the specimen should be taken at any time after the seventh day. In a few instances the test may remain negative until the tenth or twelfth day and then suddenly become strongly positive.

No result other than a positive or strongly positive Weil Felix test should be considered

to be of diagnostic importance and even then only when there is reasonable concurrence with clinical findings. When the test is reported doubtful or weakly positive, the physician should wait a day or two and submit a second specimen. If the second test shows an appreciable increase in titer and all tests for other causes of fever are negative or show no change, the physician is justified in a diagnosis of typhus, unless the clinical findings are grossly at variance.

False Reactions

The laboratory occasionally encounters cases where positive agglutination tests are obtained for typhus as well as for typhoid or undulant fever. In most such instances, one of the two or three positive reactions is predominantly stronger, and hence is given diagnostic preference. It is quite common to obtain a strongly positive test for typhus and a weakly positive for typhoid, or vice versa. We have two instances on record where equally strongly positive tests for typhoid and typhus were obtained, but in both instances cultures of the blood clots from the same specimens were positive for typhoid. Obviously both patients had typhoid fever. Many interesting and at times puzzling multiple reactions could be cited, but in this short paper space will not permit. With only a few exceptions, however, these false reactions can be finally ruled out, even though it may require a second or even a third specimen and other laboratory aids to do so.

If the physician is seriously seeking aid from the laboratory, he may often profit by submitting in addition to further specimens a brief clinical history of the case. The laboratorian does not presume to be a clinical diagnostician, but he may, through long experience with the limited number of diseases which permit of laboratory diagnostic assistance, be able to resort to special tests which are not used routinely and thus find a solution or he may from the clinical data alone be able to make valuable suggestions.

The physician should also keep in mind that when he sends in a specimen of whole blood in a sterile Keidel tube he can upon written request get tests of typhoid, typhus, undulant fever, tularemia and the Wassermann test for syphilis. He also gets rou-

tinely a culture of the blood clot. Results of all these tests are not forthcoming, however, unless he takes the trouble to specify in writing on the information blank each disease he wants a report on. Of course, if only one disease is specified and we find something else of importance, these findings will be reported also. We frequently get a positive test for typhus on specimens submitted only for typhoid or vice versa, and until recently most of the cases of undulant fever found in the laboratory were unsuspected by the physician.

Typhus fever is becoming so common that the average physician is already familiar with its clinical manifestations and hence needs little or no laboratory assistance in diagnosis. Nevertheless, not all cases are clinically typical and the laboratory is always ready to render assistance.

JOE P. BOWDOIN, M.D.,
Assistant Director,
Department of Public Health.

CORRECTION OF MINUTES

To The Editor:

In the minutes of the meeting of The Medical Association of Georgia at Macon, I notice an error. It might not make any difference, except for the fact that some of the doctors of the Fourth District might think I had mis-stated facts.

I am quoted as saying: "I was nominated by the district but wished to retire."

What I did say is this: "On account of the rearrangements of the districts, we had not had a district meeting and no one had been nominated. As my term had expired I wished to retire, but preferred to have others from my district make the nomination rather than make one myself."

Following this the President of the Association nominated Dr. K. S. Hunt.

O. W. ROBERTS, M.D.
Carrollton, Ga., June 30, 1933.

OCCURRENCE OF BORDET-GENGOU BACILLUS

The results of the examinations (of 3,897 specimens, 2,144 of which came from pertussis patients) of BJORN KRISTENSEN, Copenhagen, Denmark (*Journal A. M. A.*, July 15, 1933), are comparable with the hypothesis that the Bordet-Gengou bacillus is the etiologic agent of whooping cough. The cough-plate method has been used for sixteen years at the State Serum Institute at Copenhagen and has proved to be of practical value. It is the best method for diagnosing the disease early. An isolation period of four weeks after the onset of the typical paroxysm has in practice been sufficient for school children.

WOMAN'S AUXILIARY OFFICERS

President—Mrs. J. Bonar White, Atlanta.
 President-Elect—Mrs. J. E. Penland, Waycross.
 First Vice-President—Mrs. J. J. Pilcher, Wrens.
 Second Vice-President—Mrs. R. C. Pendergrass, Americus.
 Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.
 Corresponding Secretary—Mrs. E. A. Allen, Atlanta.
 Treasurer—Mrs. Chas. Usher, Savannah.
 Historian—Mrs. E. R. Harris, Winder.
 Parliamentarian—Mrs. J. M. Barnett, Albany.
 Editor—Mrs. W. A. Selman, Atlanta.

NINTH ANNUAL SESSION DELEGATES AND EXECUTIVE BOARD MEETING

The meeting of the Delegates and Executive Board was held at Hotel Dempsey, Macon, on May 10, 1933. Called to order by Mrs. S. T. R. Revell, Louisville, President, at 10:00 o'clock.

Invocation by Rev. W. R. Mackay, Pastor of the First Presbyterian Church, Macon.

Greetings by Mrs. Wallace Bazemore, Macon.

The President introduced the following: Mrs. Jas. N. Brawner, Atlanta, Past President of the Auxiliary and the Southern Medical Auxiliary; Mrs. R. H. Hankinson, President of the Georgia Parent-Teacher Association; Mrs. E. D. Dimmock, Waycross, Health Chairman of the Georgia Federation of Women's Clubs; Mrs. J. Bonar White, Atlanta, 1st Vice-President of the S. M. A. Auxiliary; Miss Jane Van De Vrede, Executive Secretary, Georgia State Nurses' Association; and Mrs. Chas. H. Richardson, Macon. Also Past Presidents of the Auxiliary as follows: Mrs. Wm. H. Myers, Savannah; Mrs. C. W. Roberts, Atlanta; Mrs. Paul Holliday, Athens; Mrs. Chas. C. Hinton, Macon; and Mrs. Ralston Lattimore, Savannah.

Mrs. J. L. King, Macon, Chairman of the Entertainment Committee, outlined the program of entertainment.

A telegram from Mrs. Chas. C. Harrold, from Baltimore, extending greetings and best wishes, was read.

Minutes of the 1932 Savannah meeting were read and adopted.

The members stood in silent prayer, concluded by the President, in tribute to Mrs. Geo. Fuller, Atlanta, who was called home on account of the death of her father. Motion carried to extend sincere sympathy.

Mrs. J. D. Applewhite, Macon, Chairman of Credentials Committee, reported a registration of 71, with five guests.

Mrs. Chas. C. Hinton, Macon, Parliamentarian, read the rules to govern the procedure. Motion carried to adopt the rules.

President of the Association, Dr. Marvin M. Head, Zebulon, was introduced by Mrs. Revell. He complimented the Auxiliary on its excellent work for health education and the Student Loan Fund.

Dr. B. H. Minchew, Waycross, Chairman of the Advisory Committee, was introduced by Mrs. Revell. He spoke in a very pleasing manner and assured the members of his deep interest in their work and eagerness to assist them.

Reports were submitted from the following District Managers.

First District—Mrs. L. F. Lanier, Sylvania.

Second District—Mrs. Nichols Peterson, Tifton.

Third District—Mrs. Herschel Smith, Americus.

Sixth District—Mrs. Wallace Bazemore, Macon.

Ninth District—Mrs. C. L. Ayers, Toccoa.

Tenth District—Mrs. Jas. B. Dillard, Davisboro.

Mrs. Ray Carter sang two numbers, accompanied by Mrs. Raleigh Drake. At the suggestion of Mrs. Wm. H. Myers, all stood in grateful acknowledgement of the lovely numbers.

Dr. Joe P. Bowdoin, Atlanta, Assistant Director of Public Health, was introduced by Mrs. Revell. His address portrayed the Woman's Auxiliary as the most excellent means of contact between lay organizations and the medical profession.

Mrs. E. D. Dimmock, Chairman of Health Work of the Georgia Parent-Teacher Association, spoke on the "Co-operation of the Medical Association of Georgia, the Woman's Auxiliary and the Federation of Women's Clubs."

Miss Jane Van De Vrede, Atlanta, extended greetings from the Georgia State Nurses' Association.

Two violin solos were played by Mrs. Glen Priest Maerz, accompanied by Mrs. George Rankin, Jr. The members again stood as an acknowledgment of their thanks.

Reports from counties submitted by districts were as follows:

First District—Chatham County, Mrs. A. A. Morrison, Savannah.

Second District—Sumter County, Mrs. Herschel Smith, Americus.

Fifth District—Fulton County, Mrs. Dan Y. Sage, Atlanta.

Sixth District—Bibb County, Mrs. Wallace Bazemore, Macon.

Eighth District—Clarke County, Mrs. Paul Holliday, Athens; Hart County, Mrs. Joe Jenkins, Hartwell.

Ninth District—Cherokee-Pickens counties, Mrs. D. H. Garrison, Tate; Habersham county, Mrs. J. H. McClure, Cornelia; and Stephens County, Mrs. C. L. Ayers, Toccoa.

Tenth District—Jefferson county, Mrs. S. C. Ketchin, Louisville; Washington county, Mrs. O. D. Lennard, Tennille.

11th District—Glynn county, Mrs. Jno. W. Simmons, Brunswick; and Ware county, Mrs. C. M. Stephens, Waycross.

Other county reports were filed.

Mrs. Chas. C. Hinton, Macon, Chairman of the Executive Board, announced the personnel of the following committees:

NOMINATING COMMITTEE: From the Executive Board, Mrs. Ralston Lattimore, Savannah, Chairman; Mrs. J. A. Selden, Macon, and Mrs. Herschel Smith, Americus. *From the body at large:* Mrs. Jas. N. Brawner, Atlanta; Mrs. Wm. H. Myers, Savannah; Mrs. C. M. Stephens, Waycross; Mrs. J. H. McClure, Cornelia.

AUDITING COMMITTEE: Mrs. C. L. Ayers, Toccoa; Mrs. D. H. Garrison, Tate; and Mrs. Wm. Shearouse, Savannah.

Mrs. Ralston Lattimore, Savannah, spoke on "The Student's Loan Fund".

The following committees were appointed by the President:

RESOLUTIONS: Mrs. Jas. N. Brawner, Atlanta, Chairman; Mrs. C. L. Ayers, Toccoa; Mrs. Herschel Smith, Americus; Mrs. Joe Jenkins, Hartwell; Mrs. C. C. Hinton, Macon.

COURTESY RESOLUTIONS: Mrs. Paul Holliday, Athens, Chairman; Mrs. J. W. Simmons, Brunswick; Mrs. J. J. Pilcher, Wrens; Mrs. G. H. Lang, Savannah; and Mrs. D. H. Garrison, Tate.

Mrs. J. A. Selden, Macon, Chairman of the Health Film Committee, showed the film, "Forming the Habits of Health".

Meeting adjourned at 1:30 P. M.

MRS. J. E. PENLAND,
Recording Secretary.

Mrs. W. A. Selman, 760 Penn Avenue, N.E., Atlanta, will be pleased to receive reports of county and district meetings to be published in the Auxiliary's department.

COMMUNICATION ARTICLES ACCEPTED

To the Editor:

In addition to the articles enumerated in our letter of June 30 the following have been accepted:

E. R. Squibb & Sons: Ipral Tablets, $\frac{3}{4}$ grain.

The following product has been included in the List of Articles and Brands Accepted by the Council But Not Described in N. N. R. (New and Non-official Remedies, 1933, p. 437):

Merck & Co., Inc.: Carbon Tetrachloride-Merck.

PAUL NICHOLAS LEECH, *Secretary,*
Council on Pharmacy and Chemistry,
American Medical Association.

Chicago, Ill.

August 2, 1933.

TRUTH ABOUT MEDICINES NEW AND NONOFFICIAL REMEDIES

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Non-official Remedies:

Erysipelas Streptococcus Antitoxin Refined and Concentrated—P. D. & Co.—This product (New and Nonofficial Remedies, 1933, p. 364) is also marketed in packages of one piston syringe containing 20 cc. Parke, Davis & Co., Detroit.

Sal Ethyl Carbonate.—The carbonic acid ester of ethyl salicylate.—Salicylic ethyl ester carbonate.— $\text{O}:\text{C}(\text{OC}_2\text{H}_5.\text{COOC}_2\text{H}_5)_2$. Sal-ethyl carbonate provides the antipyretic and analgesic effects of the salicylates. It is relatively insoluble in water and in the acid secretions of the stomach. For cases requiring a rapid analgesic and antipyretic effect rather than salicylate saturation, tablets sal-ethyl carbonate with amidopyrine are supplied. The product is supplied in the form of Compressed Tablets Sal-Ethyl Carbonate, 5 grs., Compressed Tablets Sal-Ethyl Carbonate with Amidopyrine and Tablet Triturates Sal-Ethyl Carbonate, 1 gr. Parke, Davis & Co., Detroit.

Antipneumococcic Serum (Felton) Type I.—An antipneumococcus serum (New and Nonofficial Remedies, 1933, p. 369) prepared by immunizing horses with killed cultures of highly virulent *Diplococcus pneumoniae* isolated from lobar pneumonia. It is refined and concentrated by the method of Dr. L. D. Felton. The finished product contains type II pneumococcus antibodies but not in therapeutically important amounts. It is marketed in packages containing 10,000 and 20,000 units of type I pneumococcus. Parke, Davis & Co., Detroit. (Jour. A. M. A., July 29, 1933, u. 366.)

Seizures in July by the Federal Food and Drug Administration, according to Mr. Campbell, include a wide variety of medicinal products recommended for such diseases as neuritis, pyorrhea, heart trouble, eczema, asthma, arthritis, rheumatism, and disorders of the liver, kidneys and stomach.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*REGULATING IMPOUNDED WATERS
FOR MALARIA CONTROL

If it were not for impounded water, either natural or artificial, it is probable that malaria would be a very minor public health problem in the southeastern United States. This statement is based upon the assumed definition of impounded water as a body of water, large or small, with wholly or partly obstructed flow. It is a definite conclusion that water in a quiescent or semi-quiescent state affords a preferential condition for the particular species of mosquito known as *Anopheles quadrimaculatus*. However, the quiescent or semi-quiescent condition alone is not the only contributing factor for such preference. There must also be present certain vegetation, living or dead, which contributes to the preferential conditions. In addition to certain aquatic and semi-aquatic living vegetation, dead vegetation such as bark and trash floating on the surface of the water contributes largely to such conditions. This dead floating material is the greatest contributing factor on newly impounded areas.

In view of such knowledge of impounded waters, both natural and artificial, under biological conditions as described, it may be said that by two very definite methods malaria may be reduced to a minor problem. One method is by drainage of all natural and unnecessary bodies of water, chiefly in the form of ponds; and the other by state control over all artificial bodies of water created for the purposes of power production and for recreational or other uses.

It is of interest that although for a period of about forty years since the cause of malaria became known various methods of mosquito eradication have been practiced and only a period of about ten years since scientific studies were begun on artificially impounded waters. There has been a period of only about one-half this time since the first impounded water regulations were adopted, Georgia being one of the first states to adopt such regulations. In January 1924, the State Board of Health passed regulations controlling impounding of waters for hydro-electric development and other purposes. In 1928 and 1929, there was a very marked increase of malaria due to unprecedented rainfall. It is interesting to note that of all newly impounded waters in the state which have been regulated by the State Board of Health, there has been no definite malaria increase or no epidemics

adjacent to such areas. This fact is particularly significant, considering that past history of newly impounded areas shows in nearly every instance serious malaria epidemics. This prompted and brought into effect our impounded water regulations. We must visualize the probable serious effect of impounded waters during the two years of increased malaria infection had not these regulations been promulgated and enforced for malaria prevention. Impounded water regulations do not include natural ponds, lakes and similar bodies of water but only such waters as are artificially impounded for power production or recreational purposes.

In comparing natural and artificial impounded waters, the artificial body generally is a far greater menace than the natural, especially during the first several years after the water is impounded. This is due to an accentuated biological condition caused by the contact of water with many various conditions of vegetation. It is during the first few years when such biological condition is at its height that serious malaria epidemics occur adjacent to newly impounded areas.

We have in our state considerably over 100,000 acres of impounded water chiefly for hydro-electric development, representing approximately forty-two hydro-electric projects. About one-third of this area of impounded water for hydro-electric development is in or adjacent to that portion of the state in which malaria is a problem. This increases its magnitude.

A person or company who wishes to impound a body of water should get in touch with the State Board of Health so that preliminary supervision may be given. An application should be submitted with the name of the person, firm, corporation, county or municipality making application, with a complete description of the project and maps showing the area to be impounded. The proposed project is studied by the State Board of Health, regulations agreed to by the person or company proposing the project, and a preliminary permit to proceed with construction granted. This preliminary permit binds the person or company to comply with the regulations. The final permit is issued after the area is entirely cleared of all vegetation, the water raised to maximum elevation and effective larvacidal control provided during mosquito breeding season. The area then becomes one which the State Board of

Health will continue to supervise throughout each malaria season.

It may be in order to describe larvicidal control on impounded areas, some of which have not been cleared of vegetation. All such bodies of water developed chiefly in the coastal plain section are under larvicidal control from spring until fall at the expense of the development. Most of the companies use an oil spray applied under air pressure known as the "oil air method"; some use Paris green diluted with hydrated lime, while others use oil by what is known as the "oil water method". This latter method differs from the "oil air" method in that instead of the oil being under compressed air, the oil is fed into the pump suction line of a water pump mounted on a boat pumping a stream of oil and water along the shore line. Comparing the value of Paris green and oil control, each is applicable to varying conditions. Paris green is of greater value on an area uncleared or dense in vegetation, chiefly because it has a wider spreading area, will penetrate to remote places where oil will not reach, boat navigation is reduced to a minimum, and its application is cheaper on such an area and more agreeable and convenient of application.

On a properly cleared area where a narrow margin of shore line control is necessary and a wide spread of larvacide is not necessary, and where the bank will form a barrier holding the oil film, oil is probably more effective. Furthermore, the personal element in larvacide application is most important. It requires less intelligence and less experience to apply the oil; also, shifting of air currents is not detrimental as in application of Paris green. Application of Paris green to large areas requires intelligence, excellent judgment and extreme care.

In order to determine results obtained for mosquito control, it is necessary that the State Board of Health periodically make test dipplings for larvae, in addition to establishing adult mosquito roosting stations adjacent to the areas.

It may be stated that there is no conflict whatsoever between hydro-electric development and health conservation. Rather the two are workers together for the common good, water power promoting industrial and social progress and public health providing an atmosphere in which enterprise can live and move. However, it has taken quite a few years to build up a cooperative attitude from promoters of impounded water projects. The regulations involve the expenditure of large sums of money, especially when the project comprises thou-

sands of acres for hydro-electric development. We are gratified to have obtained such excellent cooperation from the public. Next to control of artificially impounded waters, our great problem is to stimulate interest in drainage which will effect elimination of all such natural bodies of water not serving any particular purpose. When this is done, we believe Georgia will go forward as never before in agricultural and industrial expansion and our citizens will be healthy and prosperous.

Diverting from the subject of impounded waters, we will discuss briefly how the practicing physician can best cooperate with the State Board of Health for malaria control. At the same time we wish to give credit to the very generous attitude of the medical profession for imparting aetiological information to malaria patients and to families living in localities where malaria infection is a serious problem. However, it has been observed from long experience that some family physicians are reticent in imparting to their patients and the general public necessary knowledge of the cause of malaria and the simple means of prevention. We ask the cooperation of every physician in this great missionary cause.

In treatment of malaria cases far too many are only arrested by a minimum amount of quinine rather than cured by the maximum amount. This we know is often due to neglect on the part of the patient. Most of our physicians assure themselves that a patient is thoroughly sterilized and then try to educate him and other members of the family as to preventive methods, or else advise him to communicate with his state or county board of health requesting educational literature. The family physician is often the only person of superior knowledge who comes in close contact with poverty and ignorance. He is usually the professional adviser respected above all others, and paid little or not at all. He too often is expected to serve with the altruism of the Good Samaritan and with the patience of Job. However, a little seed of knowledge dropped here and there may eventually produce a prosperous city, county or community. When malaria is controlled every one profits. The practicing physician is often the only possible medium between the county or state board of health and the most ignorant citizen. Education imparted by the family doctor concerning disease prevention may mean the salvation of a community. The role of the physician is to prevent and cure disease and his reward will be great.

NEWS ITEMS

The Randolph County Medical Society met at Cuthbert on August 3rd. Dr. Steve P. Kenyon, Dawson, read a paper on "Brill's Disease". Other members gave reports of cases.

Dr. C. L. Penington, Macon, announces that Dr. Ford Ware, formerly of Americus and Mooresville, N. C., will be associated with him in a suite of offices in the Doctors Building, Macon, in the practice of diseases of the eye, ear, nose and throat. Dr. Ware has taken post-graduate study at the New York Eye and Ear Infirmary, New York City.

The Ware County Hospital, Waycross, according to reports just published, has treated 1,290 patients since it opened less than one year ago.

Dr. J. P. Kennedy, Atlanta, City Health Officer since 1901, has just been re-elected for another term of four years.

Dr. J. O. Elrod, Forsyth, served as Major at Camp Jackson during the encampment of 105 Medical Regiment of the 30 Division of National Guards, July 16th to 30th.

The Ware County Medical Society met at the Atlantic Coast Line Hospital, Waycross, on July 12th. Dr. A. W. DeLoach, Waycross, read a paper entitled "Acute Abdominal Pain".

Dr. C. C. Brannen, Moultrie, spoke on "Medical Costs and the Future of Healing" before a meeting of the Kiwanis Club at Moultrie on July 12th. He pointed to many problems which confront the medical profession, among them: "It seems correct to say that our country is half protected and half neglected, half healthy and half diseased. This situation is serious and menacing and constitutes a vital social problem. There are seven thousand hospitals in the United States, yet there are certain parts of the country which lack hospital facilities entirely. The general conclusion is that there is not a lack of all kinds of facilities, but the facilities are unorganized." In closing, Dr. Brannen quoted from the Connecticut Health Bulletin as follows: "No one method alone can develop a health consciousness in a community. But the sum total of all vehicles for health education, if facts are correctly and convincingly presented, will be the means of promoting health through a well-informed public."

The Whitfield County Medical Society met at the office of Dr. J. H. Steed, Dalton, on July 12th. Dr. Steed read a paper entitled "Aconite, Its Actions and Antidotes".

Dr. and Mrs. R. B. Lamb, Demorest, entertained the members of the Habersham County Medical Society and Auxiliary at their home on July 13th.

The Ware County Medical Society met at Waycross on August 2nd. Dr. R. L. Johnson, Waycross, read a paper entitled "Intra-Cranial Trauma". Dr.

A. W. DeLoach and Dr. C. M. Stephens, both of Waycross, entertained the members at dinner.

The Leon Moye Medical Society, which consists of the counties of Montgomery, Tooms, Treutlen and Wheeler, was reorganized on July 27th. Dr. Cleveland Thompson, Millen, Councilor for the First District, called the meeting which was held at the Omberg-Bernice Hotel, Vidalia. Those present were: Dr. Cleveland Thompson, Millen; Dr. Guy G. Lunsford, Millen; Dr. J. E. Mercer, Vidalia; Dr. C. W. Findley, Vidalia; Dr. J. H. Dees, Alston; Dr. W. W. Odom, Lyons; Dr. H. D. Youmans, Lyons; Dr. W. F. Peacock, Vidalia; Dr. John M. Meadows, Vidalia; Dr. H. C. Sharpe, Alston; Dr. J. W. Palmer, Ailey; Dr. W. M. Moses, Uvalda; Dr. W. A. Rivers, Glenwood; Dr. McDermid; and Dr. Wm. W. Aiken, Lyons. Officers elected were: Dr. J. E. Mercer, Vidalia, President; Dr. J. W. Palmer, Ailey, Vice-President; Dr. Wm. W. Aiken, Lyons, Secretary-Treasurer. Monthly meetings will be held at Vidalia, the first on August 24th. Dr. Cleveland Thompson outlined a plan for postgraduate study by any and all members of the Association which was unanimously approved. Dr. McDermid gave a case report. The Society was reorganized with a great deal of enthusiasm and with the avowed purpose of enrolling every eligible doctor in the four counties. Dutch supper was served.

Extension courses for physicians of Georgia were held at Athens, LaGrange, Rome, Statesboro, and Valdosta. All local arrangements were in charge of members of the medical societies of Clarke, Troup, Floyd, Bulloch-Candler-Evans, and Lowndes counties. The courses were given from June 19th to July 21st and were sponsored by the Medical Association of Georgia, Emory University School of Medicine and the State Board of Health. Speakers for the extension work were: Dr. M. K. Bailey, Dr. Frank K. Boland, Dr. M. L. Boyd, Dr. Dan C. Elkin, Dr. W. L. Funkhouser, Dr. F. G. Hodgson, Dr. Jas. E. Paullin, Dr. M. Hines Roberts, Dr. Stewart R. Roberts, and Dr. C. W. Strickler, all of Atlanta. Dr. R. H. Oppenheimer, Dean of Emory University School of Medicine, assigned the subjects for the addresses.

The Telfair County Medical Society met at Lumber City on August 8th.

The Carrollton Clinic, Carrollton, after being closed for several weeks, has re-opened in a modern building with increased bed capacity and facilities for the care and treatment of patients. The Clinic was originally opened in August, 1929. More than eight hundred patients have been admitted and treated in less than four years.

A charitable hospital will be established at Augusta for the care and treatment of incurables to be known as the Anderson Clinton Hospital. Funds were provided under the provisions of the will of the late Hon. Linwood C. Hayne.

Dr. Guy G. Lunsford, Millen, Jenkins County Commissioner of Health, in co-operation with representatives of the State Tuberculosis Sanatorium, Alto, held a chest clinic at Millen on August 10th.

The Lowndes County Medical Society met at the office of Dr. H. W. Clements, Adel, on July 11th. Dr. H. C. Schenck, Alto, spoke on the Diagnosis and Treatment of Tuberculosis. Dr. and Mrs. H. W. Clements, Adel, entertained the members of the Lowndes County Medical Society at dinner.

The Tenth District Medical Society met at Hartwell on August 9th. Titles of scientific papers on the program were as follows: "Adequate Medical Care", Dr. W. D. Gholston, Danielsville; "Diseases and Conditions of the Newborn", Dr. W. A. Johnson, Elberton; "Ocular Signs in Relation to General Diagnosis", Dr. J. M. Hull, Augusta; "The Value of More Careful Urological Study in General Practice", Dr. Philip R. Stewart, Monroe; "Metatarsalgia", Dr. H. M. Michel, Augusta; "Failure of Left Ventricle", Dr. G. O. Whelchel, Athens; Address by Dr. Chas. H. Richardson, Macon, President of the Association; address by Dr. W. C. McGeary, Madison, President of the Society; "Multiple Polyposis of Colon—Case Report", Dr. R. H. Chaney, Augusta; "Diabetes—Its Treatment in Relation to Arteriosclerosis", Dr. H. I. Reynolds, Athens. The next meeting of the Society will be held at Augusta, February 14th.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on August 17th. Titles of papers on the scientific program were: "Esophago-Pleurocutaneous Fistula—Case Report", Dr. O. O. Fanning, Dr. Ben H. Clifton, and Dr. Wm. F. Lake, all of Atlanta; "Arthritis Treated by Hyperpyrexia—Case Report, Presentation of Patient", Dr. Hal M. Davison and Dr. Mason I. Lowance, both of Atlanta; "Syphilitic Aortitis", Dr. E. A. Allen, Atlanta; "Acute Intestinal Obstruction in the Negro", Dr. Frank K. Boland, Atlanta. The discussions were led by Drs. Hugh Wood, C. B. Upshaw and I. A. Ferguson, all of Atlanta.

Dr. H. M. Tolleson, Habira, entertained the members of the Lowndes County Medical Society at a chicken supper on August 8th.

The Whitfield County Medical Society met at the office of Dr. H. J. Ault, Dalton, on August 8th. Dr. Ault read a paper entitled "Acute Gonorrhoeal Conjunctivitis".

The Jackson, Barrow Medical Society met at Jefferson on August 7th. Dr. E. R. Harris, Winder, read a paper entitled "Amebic Dysentery".

The Telfair County Medical Society met at Lumber City on August 8th. A fish dinner was served at the "little River Club House".

OBITUARY

Dr. Joseph Allison Jarrell, Jackson: Bellevue Hospital Medical College, New York City, 1885; aged 77; died at his home on June 8, 1933. He was a well-known physician and large owner of real estate. Dr. Jarrell had practiced medicine in Butts and adjoining counties for more than thirty-five years. Funeral services were conducted from the residence by Rev. T. M. Callaway. Interment was in the city cemetery.

Dr. Forrest Lee Cosby, Columbus; Emory University School of Medicine, Emory University, 1894; aged 69; died at his home on June 12, 1933. He was born and reared in Talbot county. For many years he was county physician and Muscogee County Commissioner of Health. Doctor Cosby practiced medicine in Columbus from 1899 until a few weeks before his death. He was a prominent physician and always charitable. Surviving him are two daughters: Mrs. Nina C. Bryant and Mrs. R. S. Hood; one son, Dr. F. L. Cosby, Jr. Funeral services were conducted from the residence of his daughter, Mrs. Bryant. Interment was in Riverdale cemetery.

Dr. John Dooley Mauldin, Gainesville; University of Georgia Medical Department, Augusta, 1901; aged 57; died at the United States Veterans' Hospital, Atlanta, on June 6, 1933. He was born and reared in Forsyth county. Doctor Mauldin practiced medicine in Gainesville and New Holland before the World war. When the United States entered the war, he enlisted in the medical corps and was given the rank of captain. He returned to Gainesville last summer after spending seven years in Phoenix, Arizona. Doctor Mauldin was a member of the American Legion, Masons and the Baptist church. Surviving him are his widow, four sons; J. D. Mauldin, Jr., Philadelphia; William and Louis of Phoenix, Arizona; and Victor of Gainesville. Rev. Roland Q. Leavell conducted the funeral services from the First Baptist church. Burial was in Alta Vista cemetery.

Dr. William Lincoln Barnes, Atlanta; University of Louisville School of Medicine, Louisville, Ky.; aged 71; died on June 23, 1933. He practiced medicine in the North for 25 years before moving to Atlanta and continued his practice here for more than 20 years until his health failed. Doctor Barnes was a prominent physician and favorably known in medical circles. Surviving him are one daughter, Mrs. L. M. Davenport, Miami, Fla., and a number of stepchildren. Funeral services were conducted from the residence by Dr. John M. Walker. Burial was in Crown Hill Mausoleum.

Dr. Theodore Eugene Oertel, Augusta; member: George Washington University Medical School, Washington, D. C., 1892; aged 69; died on June 28, 1933. He was born at Westerly, Rhode Island. In the beginning of his business career, he was associated

with his father in the lumber business at Orange Spring, Fla. Later he began the study of medicine at Washington, then joined a relative on a ranch at Fort Wingate, New Mexico, where he rode the range as a cowboy, then returned to Washington to continue his study of medicine where he graduated. Dr. Oertel served as Major in the World war and after the Armistice was signed, he was commissioned to inspect German prison camps. He took post-graduate study in New York City, also at Johns Hopkins University School of Medicine, Baltimore, Md. Doctor Oertel was identified with the University of Georgia Medical Department, Augusta, for thirty-five years and worked for the advancement of medicine. He introduced laboratory training and established the teaching of pathology in the school. In addition to his practice and teaching, he wrote many articles on medicine and two historical novels. He was a member of the Richmond County Medical Society, F. & A. M., and the Episcopal church, also a fellow of the American College of Surgeons and the American Medical Association. Surviving him are his widow, one son, R. C. Oertel, Augusta; one brother, J. F. Oertel, Vienna, Va.; one niece, Mrs. Virginia Schulze. Funeral services were conducted from the residence, 638 Greene street. Burial was in Arlington National cemetery.

Dr. Norman E. Benson, Albany; member: Atlanta College of Physicians and Surgeons, Atlanta, 1903; aged 57; died at a private hospital on July 4, 1933. He moved to Albany from Calhoun county twenty-five years ago. For a number of years he was associated in the practice of medicine with the late Dr. Wm. L. Davis and after dissolution of the partnership, he opened offices of his own. Doctor Benson was elected City Health Officer for Albany about eight years ago. He was an estimable citizen and had many friends throughout Dougherty county. Doctor Benson was a member of the Dougherty County Medical Society and the Baptist church. Surviving him are his widow, two sons, Dr. N. O. Benson, Lumberton, N. C., and Hoyt Benson, Albany; one daughter, Miss Elizabeth Benson, Albany. Funeral services were conducted by Dr. James B. Turner, Pastor of the Griffin Baptist church.

Dr. Thomas Spencer Layton, Hinesville; Southern Medical College, Atlanta, 1891; aged 75; died suddenly at his home on June 30, 1933. He was born in Laurens county, S. C. Doctor Layton had been prominent in public life. He served as mayor of Hinesville and as president of the Hinesville Bank. Doctor Layton was kind and charitable and held in high esteem by many friends throughout Liberty county. Surviving him are his widow and three sisters. Funeral services were conducted from his home and interment in the Presbyterian church cemetery at Flemington.

Dr. S. M. Johnson, Wrightsville; Emory University School of Medicine, Emory University, 1893; aged 74; died at his home of heart disease on August 31, 1933. He did a great deal of charity work and his ever-ready services were in continuous demand. Doctor Johnson was an excellent citizen and held in high esteem. Surviving him are two daughters, Miss Doris Johnson and Mrs. Wallace Wilkes; one son, S. M. John, Jr., all of Atlanta. Funeral services were conducted from the home by Rev. H. H. Heisler, Pastor of the Methodist church. Interment was in West View cemetery.

Dr. Thomas C. Cannon, Jonesboro; University of Georgia Medical Department, Augusta, 1883; aged 75; died at the home of his daughter, Mrs. Edgar Shipp, Jr., College Street, Americus, on July 16, 1933. He practiced medicine from 1844 until 1930, when forced to retire on account of ill health. It is doubtful if any citizen of this generation was held in higher esteem by hundreds of acquaintances. Those who knew him never doubted his honesty and sincerity. Surviving him are his widow, three daughters; Mrs. Edgar Shipp, Jr., Americus; Mrs. Otis Mumfort, Manchester; Miss Guinn Cannon, Albany; one son, Lieutenant A. E. Cannon, U. S. Army. Funeral services were conducted from the Hart Mortuary, Macon, by Rev. O. M. Siegler, Pastor of the First Baptist church of Americus. The body was cremated.

BOOK REVIEWS

Senile Cataract, by W. A. Fisher, M.D., F.A.C.S., Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College; Formerly Professor of Clinical Ophthalmology, University of Illinois; Formerly Surgeon, Illinois Charitable Eye and Ear Infirmary; Formerly President Chicago Ophthalmological Society; Member, Illinois State Medical Society; Chicago Medical Society; Fellow, American Medical Association; Fellow, American College Surgeons; Fellow of the Academy of Ophthalmology and Oto-Laryngology. Pp. 267. Published by Chicago, Eye, Ear, Nose and Throat College, Chicago, Illinois, 1933.

This volume is primarily intended for the eye surgeon. The author presents a compendium of the views of six of the world's excellent ophthalmologists. He then goes on to describe his method and reason for dealing with the cataract removal by the intracapsular method.

There are several advantages in the way in which this material is presented. First, the large type and the abundance of excellent cuts with each step of the operation minutely described.

The addition of the chapter concerning the fitting of correct lenses is a valuable adjunct.

Every eye physician should at least read this work because here is presented in compact form the treatment and opinions of men of world-wide renown and authority concerning the removal of senile cataract.

ZACH W. JACKSON, M.D.

The Collected Papers of the Mayo Clinic and the Mayo Foundation: Volume XXIV—1932. Edited by Mrs. Maud H. Mellish-Wilson and Richard M. Hewitt, B.A., M.A., M.D. Pp. 1205, with 233 illustrations. Price, \$11.50. Philadelphia and London: W. B. Saunders Company, 1933.

The remarkable thing about the yearly volumes from the Mayo Clinic is their uniform excellence. This is perhaps in part explained by the great care exercised in selecting papers for preservation in book form from the great number turned out. But one third of the 1932 product is presented, and only one fifth is given in full.

The current issue contains as usual a number of papers giving surgical statistics. When one institution can boast of 128 patients who survived resection of the stomach for cancer by more than ten years and 145 others who have lived more than five years, the reader must pay attention: he can but learn.

It is not the reviewer's purpose to call attention to feats like that, for few of us will ever have occasion to excise a gastric carcinoma—it has been estimated that the average physician sees only one in three years.

The brief paper about drugs to use in heart disease is more than worth its weight in gold. The day is past when, if the cardiac patient does not do well on digitalis, it is just too bad. One devoted to the treatment of diarrhea is distinguished by its sanity. There is plenty of stuff in this volume of sound practical value to the general practitioner, plenty that can be used every day. And, particularly if he cannot afford to go away every year for postgraduate work, it is well for him to be kept abreast of the latest advances in medical knowledge. This can be done pretty well with a new Mayo volume.

L. M. B.

Gastric Anacidity: Its Relations to Disease. By Arthur L. Bloomfield, M.D., Professor of Medicine, Stanford University, and W. Scott Polland, M.D., Instructor in Medicine, Stanford University. Price, \$2.50. Pp. 188. New York: The Macmillan Company, 1933.

When one picked up a new biography of his favorite hero a few years ago, he was apt to read that not only were his idol's feet of clay, but that practically all of his anatomy was constructed of the same material. It may be that this intensive debunking destroyed our confidence in our fellows and was at the root of the recent depression. It may be that the principal reason for the renaissance of business is that now we are confident that there is a man at the helm; and it may even be that some new researcher will prove to his own satisfaction that George really did chop down the cherry tree with his little hatchet.

Be that as it may, there has been plenty of room for the debunking of medical literature. Many a physician has gone off half-cocked, has drawn con-

clusions from inadequate data, or has stated an opinion which was misinterpreted as an established fact. Above all, much stuff found its way into print written by men who were not familiar with normal variations and who had no adequate control groups. And, in the very act of copying, many an error has been perpetuated in textbooks. It was therefore fitting that the voluminous literature on the chemistry of the stomach should be critically reviewed, that every tradition should be tracked down to its source, and its truth or falsity established in the light of modern science with its refinements in technic. This the authors have done in the new addition to the Macmillan Medical Monographs. Their own extensive experience, both clinical and experimental, has well prepared them for the task they have undertaken.

The book is so compressed that an outline is impossible. Suffice it that they have found no errors in those masterful investigations by William Beaumont of the stomach of Alexis St. Martin one hundred years ago.

The reviewer is tempted to say that without study of this book no longer has one the right to pump out a stomach or even to evaluate clinically the report of gastric analysis in one of his patients.

L. M. B.

BOOKS RECEIVED

Arteriosclerosis—A Survey of the Problem. Contributors consist of 23 authors. A publication of the Josiah Macy, Jr., Foundation. Edited by Edmund V. Cowdry, Washington University, St. Louis. Contains 617 pages. Publishers: The Macmillan Company, 60 Fifth Avenue, New York City. Price \$5.00.

The Medical Clinics of North America. (Issued serially, one number every other month). Volume 17, No. 1. (New York Number—July, 1933.) Octavo of 324 pages with 64 illustrations. Per Clinic year, July, 1933 to May, 1934. Paper, \$12.00; Cloth \$16.00, net. Publishers: W. B. Saunders Co., West Washington Square, Philadelphia, Pa.

The Practical Medicine Series of Year Books—General Therapeutics. Edited by Bernard Fantus, M.D., Professor of Therapeutics, University of Illinois College of Medicine; Member, Revision Committee, United States Pharmacopeia and of National Formulary Revision Committee and Louis B. Kartoon, M.D., Instructor of Medicine, University of Illinois College of Medicine. Series 1932. Contains 448 pages. Publishers: The Year Book Publishers, Inc., 304 South Dearborn Street, Chicago, Ill.

Urine and Urinalysis by Louis Gershenfeld, Ph.M., B.Sc. P.D., Professor of Bacteriology and Hygiene and Director of the Bacteriological and Clinical Chemistry Laboratories at the Philadelphia College of Pharmacy and Science. Contains 272 pages, illus-

trated with engravings. Publishers: Lea & Febiger, Philadelphia, Pa. Price \$2.75.

International Clinics. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Pharyngology, Hygiene, and other topics of interest. By leading members of the medical profession throughout the world. Edited by Louis Hamman, M.D., Visiting Physician, Johns Hopkins Hospital, Baltimore, Maryland. With the collaboration of F. G. Blake, M.D., V. C. David, M.D., Dean Lewis, M.D., J. W. McNee, M.D., J. H. Musser, M.D., W. W. Palmer, M.D., A. L. Bloomfield, M.D., C. P. Howard, M.D., W. M. Marriott, M.D., G. R. Minot, M.D., C. C. Norris, M.D., E. Rehn, M.D. and W. M. Wilder. Volume II. Forty-Third Series, 1933. Contains 314 pages. Publishers: J. B. Lippincott Co., East Washington Square, Philadelphia, Pa.

THE PRACTITIONER'S UROLOGIC PROBLEMS

(Continued from page 307)

motes absorption of infiltrations, and over the sound as a backbone, the numerous urethral glands are massaged and emptied. The broad, soft prostate is amenable to massage; the small, hard knotty prostate is usually most unsuccessfully treated.

We are not convinced that internal antiseptics have much worth in combating gonorrhea, although we employ them quite frequently.

One bright light has come to us during this time of grave depression, we are curing more cases of acute urethritis in shorter intervals than we have previously, and the answer lies in the fact that they are not, for financial reasons, coming for treatment as often as we have previously had them do. We hope that we shall profit by this, intellectually, at least.

To dismiss the subject of gonorrhea without a few remarks aimed at that distressing symptom, "the morning drop," would leave a large percentage of our cases uncured, certainly mentally uncured. The one essential in this condition is to cut the urinary meatus to full size (and we might add that this could be done more advantageously with the first signs of a beginning gonorrhea). The meatus must be cut to admit a full size sound, for after your patient's prostate and vesicles are cleared of pus, dilatation alone will cure the majority. The stricture of small calibre is appreciated, but it does not seem that the stricture of large calibre is.

We shall dismiss the subject of gonorrheal arthritis by outlining our treatment.

Actively treat all foci in the urinary tract, and all distant foci with equal determination. Put the affected joint, or joints at rest. Employ large doses (1 c.c. to 3 c.c.) of gonococcus antigen. Potassium iodide is the only drug that we have found to be of any value.

That serious urinary obstacle, prostatic hypertrophy, is a subject unto itself. A patient enduring the agonies of prostatism, has in the past frequently deferred surgical intervention until irreparable damage had been done. Rarely does the prostatic patient present himself with symptoms of an acute attack. Far more often do they give you a history of increasing frequency of urination, more pronounced at night with possibly some terminal dribbling. Your advice to them will depend upon the amount of urinary retention present, that is the cardinal danger signal. You may try and assure them that unless they submit to prostatectomy, their symptoms will become more severe, that their kidneys are slowly becoming affected, and that a serious danger will ultimately result. Facing the inconvenience of moderately advanced prostatism on the one hand and a major operation necessitating weeks of hospitalization on the other hand, your advice is frequently deferred. Our present day low mortality rate has not sufficiently impressed itself upon those elderly individuals for them to seek early relief. That has been the status of the prostatic.

For several years we have been removing certain types of bladder neck obstruction by various intra-urethral procedures. The original punch operation has been practically discarded for the more recent electric instruments for removing contractures and bars interfering with urination, the entire procedure being visualized and the fear of hemorrhage minimized.

The operation is of a minor nature, requiring only a few days of confinement. The results obtained were satisfactory, but the procedure was limited to that type of obstruction referred to, and was not adaptable to the large lateral lobe hypertrophy, which is most frequently encountered.

We are indebted to Dr. T. M. Davis particularly, for perfecting a unit with which lateral and median lobes can as satisfactorily be removed as other types of prostatic obstruction. With the perfection of a current that would rapidly cut under water the most serious obstacle to successful trans-urethral prostatectomy was overcome. With special types of cystoscopes, we are able to engage lateral and median lobe obstruction, and un-

der direct vision, resect the blocking prostate as effectively as the sclerotic types were previously dealt with. A loop electrode rapidly cuts its way through the hypertrophied gland, removing a pencil shaped section with each excursion of the electrode. By changing the position of the loop electrode with each excursion, the blocking gland is excised in sections and removed through the sheath of the resectoscope. Any bleeding point that may present itself is immediately coagulated, a feature incorporated in the unit. Following removal of the gland a retention catheter is left in the urethra for forty-eight hours. Upon removal of the catheter, normal urination is effected.

We employ spinal or sacral anesthesia. As thorough attention is necessary to preoperative renal stabilization, as with any other type of prostatectomy. A cystoscopic diagnosis is essential to learn the type of obstruction present. The presence of stone, tumor or diverticula should be known. About 90 per cent of prostates are amenable to transurethral resection, while the remaining 10 per cent will require the open operation.

Transurethral resection has been accomplished in approximately 1,000 cases in various urologic clinics. There have been no operative deaths; the average hospital stay has been from five to six days; the results have been equally as satisfactory as with the conventional method of attack. Some form of urethral approach upon the prostate gland has been predicted and sought for a long time. We are now able to promise the prostatic relief without an outward incision; that his stay in the hospital will be less than a week, and that his chance of recovery is practically certain.

By removing the fear of a major operation done in the declining years of one's life, necessitating weeks of hospitalization with the inconvenience and dangers of a draining wound, we will see a decreasing number of chronically distended bladders. Relief will be sought with the beginning signs of prostatic hypertrophy, the first of which is usually nocturnal frequency.

These individuals in the declining years of life can now be assured of that relief which is justly theirs, at such a minimum of discomfort, that they should seek it before irreparable damage has occurred.

LONG HOURS FOR NURSES

While talk of the forty-hour week is going the rounds in industry, nurses may be hoping that some federal eye will gaze at some of the professions. Just-published figures of the Committee on the Grading of Nursing Schools show that working hours of stu-

dent nurses were somewhat *longer* in 1932 than three years before when the first survey was made. The Committee believe it should be "unthinkable" to have student nurses' hours on duty exceed forty-eight a week; "duty" does not include the additional time these girls must spend in classrooms and study. Yet last year only 140 nursing schools out of 1,224 met the standards long recommended by the National League of Nursing Education and now set as a general industrial aim: the eight-hour day and forty-eight-hour week. Eleven states, ranging from Arizona to Vermont, include not a single school which passes that test. The happy opposite is California, where practically all observe a state law requiring the forty-eight-hour week. The Committee comments that in California "Visitors who inquire 'how hospitals manage' are told that they manage very well. Once the idea is accepted, it is relatively easy to administer." They believe furthermore that unless hours are shortened voluntarily, "there is always a real likelihood that, as happened in California, organizations interested in the welfare of women will make a shorter working week for nurses a matter of state legislation. . . . Here is a matter which demands reform."

THE SURVEY, New York City.

July 15, 1933.

ACCOMMODATING ADVERTISERS

One of the many advantages this Journal has in accepting only approved advertising is the courtesy our advertisers willingly extend us when we have occasion to ask a favor. Our advertising clients are in a class we can recommend; should errors occur they are willing to accept reasonable compensation; and they display the same kindly feeling when we can demonstrate errors in copy or insertion are due to their incorrect instructions. Recently we had occasion to request Fairchild Brothers and Foster to yield a preferred position they have long held, in order that we could accept a full page contract from a new advertiser. We offered them a preferred position top of second cover, and they very graciously accepted the change, when they knew the change would benefit this Journal. Such advertising amenities exist among trusted and ethical advertisers.

R. B. DAVIS COMPANY

COCOMALT

Recent developments in the study of child nutrition emphasize anew the importance of milk. It is and always will be the mainstay of the child's diet; and the continued refusal of a youngster to drink sufficient milk for his needs is indeed a serious problem.

Fortunately it is possible to convert milk into a drink all children adore. By the simple addition of Cocomalt, milk not only becomes a delicious chocolate flavor drink—but its food-energy value is practically doubled. Cocomalt in milk provides extra proteins, carbohydrates and minerals (calcium and phosphorus). It is also a rich source of Vitamin D.

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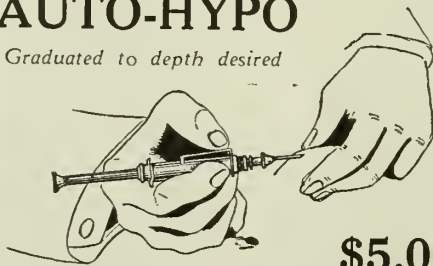
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DIAGNOSIS AND TREATMENT OF ANEURYSM*

J. L. CAMPBELL, M.D.
Atlanta

One by one the symptoms and physical signs making up the clinical picture of the different types of aneurysms have been evolved during the seventeen hundred years since the time of Galen of Alexandria in the second century to Harrison M. Branham of Brunswick, Georgia, in the latter years of the nineteenth century.

When an arterial aneurysm is not the result of trauma the patient usually tells us that his attention was called to it by a throbbing sensation in a small lump. As it was not sore and did not give any particular pain, he paid no further attention to it until one day the limb began to tingle as if "going to sleep" and shooting pains became frequent. By this time the lump had increased in size and he began to be alarmed.

If the usual signs outlined in the textbooks are present we find a soft, loose, spongy mass situated in the course of an artery. There will be expansile pulsation, a systolic thrill and a bruit. The mass will diminish in size and the thrill and bruit will disappear when pressure is applied above, but increase in size and become tense when the pressure is made below. The thrill and bruit are the most important features. If the sac is thin or contains only a moderate amount of clotted blood the expansile pulsation is of great value in differential diagnosis.

If all aneurysms presented these features and we could remember that all masses lying in the course of an artery, no matter how small the vessel, are potential aneurysms, it

would not be necessary to say that "aneurysms present a longer list of diagnostic errors than any lesion in the human body."

We have collected from the Emory University Clinic, from Grady Hospital, and from the hospital at the Federal prison a series of sixty-eight cases of the various types of aneurysms of the surgically accessible vessels. It is not my intention to make a detailed report of this series, but to use it collectively as a basis for a study of the differential diagnosis and the unusual features encountered.

During the time this study was being made a little more than 20 per cent of the cases were mistaken for abscesses, an error that has been often repeated for more than four hundred years. On account of the frequency of lymphadenitis in the inguinal region of the colored race an aneurysm of the common femoral artery may be mistaken for a bubo, an error that almost invariably proves fatal if the usual free incision is made.

An acute syphilitic aneurysm of the ulnar artery was sent to the clinic with a diagnosis of cellulitis of the forearm. Fortunately, a thrill and bruit enabled the surgeon to recognize the condition.

Three aneurysms, one of the femoral in Hunter's canal and two of the popliteal, were diagnosed as fascial sarcomas; one of the left common carotid was thought to be a lymphosarcoma, while a very vascular sarcoma was mistaken for an aneurysm. If the sac is filled with clotted blood or if it has ruptured and the tissues are infiltrated, a correct diagnosis can only be made by a tedious, painstaking history and careful search for a thrill and bruit.

A patient came to the clinic complaining of pain behind the knee joint and tingling in the foot and leg. The resident surgeon examined the popliteal space and found a

*Read before the Medical Association of Georgia, Macon, May 10, 1933.

mass which had a slight bruit, but no pulsation. The patient refused to enter the hospital and was given a palliative remedy. Forty-eight hours later he came back with beginning gangrene in the lower leg and foot. When I saw him all evidence of an aneurysm, except the mass, had disappeared and there was gangrene of the lower two-thirds of the leg and foot. The sac was opened and a hard fibrous clot, extending up the popliteal artery and down the tibials, was removed. There was no bleeding although a probe was passed some distance up the lumen of the artery. The femoral vein was ligated at the upper end of Hunter's canal, but there was no improvement; the leg was amputated about four inches below the knee. The patient fully recovered and several months later was in good condition.

Popliteal aneurysms are ruptured more frequently than those in other locations. The blood is extravasated into the cellular tissue of the space between the hamstring muscles and the heads of the gastrocnemius so that the leg is flexed to an angle of from thirty to forty degrees. The pain is intense, the skin shiny and almost bloodless. A bruit usually can be heard at the apex of the space between the hamstring muscles; otherwise, the diagnosis must depend upon the history. This complication occurred in five of our thirteen popliteal aneurysms. At operation the clotted and liquid blood extravasated, ranged in amount from 500 to 2000 cc.

A frail mulatto woman was admitted to the ear, nose and throat department of the Emory University Unit of Grady Hospital with a diagnosis of peritonsillar abscess. For two years she had noticed a throbbing lump on the left side of her neck just below the ear. She was taken suddenly ill during the night with pain in the throat and bloody expectoration. She could scarcely open her mouth, swallowed with difficulty and could speak only in a whisper. Examination showed the left tonsil pushed well beyond the uvula and the soft palate swollen and red. While preparations were being made to open the supposed abscess the resident surgeon was called in consultation and discovered that she had a ruptured aneurysm of

the internal carotid artery. She was transferred to the surgical department and the common carotid artery partly occluded by an autogenous fascia band. Her convalescence was slow, but she finally left the hospital greatly improved.

Pulsating hematomas or acute traumatic aneurysms were frequent in our series. Patients wounded either by a pistol ball or by a knife puncture come to the emergency clinic for first aid. There is seldom much bleeding. In the majority of instances they are allowed to return home. Several days later they return with a hematoma at the site of the wound and, when admitted to the hospital, show signs of aneurysm.

The time until the development of aneurysmal signs varied from five days to two weeks. One patient with a traumatic aneurysm of the femoral artery in Hunter's canal had been wounded five years before admission. He had a well defined clinical picture with a sac resembling a true aneurysm so closely that it was difficult to determine whether it was a true or a traumatic lesion.

Descriptions now known to apply to arteriovenous aneurysms appeared in Greek literature nearly fifteen hundred years ago, but the clinical picture was not described until 1757, when William Hunter wrote his first paper on the subject and, five years later, reported two cases. Little more descriptive matter was added until 1890, when H. M. Branham of Brunswick, Georgia, discovered that pressure over the fistula slowed the heart's action and produced dizziness which disappeared when the pressure was released. Within the last fifteen years the phenomenon now known as "Branham's sign" has been rediscovered on two occasions. Many of the constitutional effects of this lesion are now being worked out.

The most characteristic features of the clinical picture of arteriovenous aneurysms are: pulsation and a continuous thrill and bruit felt and heard with greatest intensity during the systole and gradually diminishing but never disappearing during diastole. Branham's sign was present in all of our cases. An average drop of 20 to 25 per cent in the pulse rate produced by pressure which

depended upon the size of the fistula and the length of time it existed.

Only one cirroid aneurysm is included in this series. I saw this patient with Dr. John Cross at the Federal prison where we operated. The patient is now well. The cirroid aneurysm is characterized by numerous communications between the arteries and veins over a variable area and has the appearance of a clump of varicose vessels. Unless the entire affected area is removed the condition will recur.

The treatment of all forms of aneurysm of the peripheral arteries is essentially surgical. No definite plan can be outlined to apply to all cases. There are two principles which must be remembered: first, conservation of the collateral circulation; second, control of hemorrhage during operation. In the limbs the latter is a simple matter because a tourniquet can be used. It is best not to apply this until the artery proximal to the sac has been located. In the subclavian, the carotid, and the iliac lesions this cannot be done. It is not always necessary to open the sac or vessel, but when it is we have devised a simple method of passing a small rubber tube around the artery or vein and clamping it with a broad bladed hemostat. The walls of the vessel are not injured and the bleeding can be controlled completely unless there is free collateral circulation or a large communicating branch entering the aneurysmal area.

For aneurysms of the carotids and those high up in the femorals or where there is extensive arteriosclerosis, we have used successfully partial occlusion of the vessel with autogenous fascia bands sutured around the artery close to the sac. By this method it is not necessary to open the sac and there is no danger of loss of blood. The entire procedure can be done with a local anesthetic. Slowing the current and lowering the pressure in the sac by the partial occlusion facilitates clotting and organization of the contents of the sac. It requires about three months for complete absorption of the organized clot, but the patient can do light work after three or four weeks.

We had complete success in seven out of nine cases treated in this manner: four in the common carotids, two in the femorals, and one in a pulsating exophthalmus due to a communication between the internal carotid and the cavernous sinus. In one common carotid case the blood failed to clot, probably because the patient had advanced pellagra. In the other case the external iliac was partly occluded for an aneurysm of the common femoral. Pulsation was re-established a few days later, probably because the sutures holding the fascia band gave way. The artery was successfully ligated two weeks later.

For idiopathic or old syphilitic aneurysms of the extremities there is no better method of treatment than Matas' endo-aneurysmorrhaphy. However, we have somewhat modified his procedure. After the circulation is controlled with a tourniquet placed as high as possible above the aneurysm, the sac is opened by an incision made in the long axis: the contents are evacuated, all openings located and the margins of the larger ones curetted slightly before being sutured with two rows of number one chromic catgut. The tourniquet is then loosened to see that all bleeding is controlled. We make no effort to close the sac, but pack it loosely with vaseline gauze which is allowed to remain from seven to ten days unless infection occurs. After its removal the granulating surfaces can be brought together with adhesive strips or mattress sutures. By careful attention we have secured final union which looks like healing by first intention. This method is especially applicable in those cases where the sac has ruptured and the cavity is large.

I have never been able to get union between the sclerotic surfaces of a large aneurysmal sac. In aneurysms of small arteries the vessel may be ligated proximal and distal and the sac removed. In recent traumatic aneurysms or pulsating hematomas the collateral circulation will be sufficiently established in ten days or two weeks to take care of the parts distal to the wound. For this reason, if the artery is too badly lacerated for repair, it may be ligated proximal and distal or the newly formed sac may be

wiped off and the opening closed with fine silk. Because of the effect of arteriovenous aneurysms on the heart and on adjacent vessels treatment should be instituted as soon as all danger of infection from the wound has disappeared. Our experience with this type of aneurysm was gained by observing fourteen cases: three in the common carotid, four in the subclavian, two in the profunda femoris, two in the upper femoral, and two in the popliteal.

If less than two months has elapsed since the wound, the common carotid and the jugular vein may be separated and the openings closed. All three of our operations in this location were successful. In the subclavian, profunda femoral, and popliteal, quadruple ligation and complete resection of the involved area is the procedure of choice. All of our patients treated in this way made complete recoveries, whereas one with a subclavian aneurysm, which I attempted to repair, died from shock as did another on whom we operated for a femoral aneurysm of long standing. If I had a similar case now I feel sure we could operate successfully.

In conclusion, I wish to emphasize the danger of mistaken diagnosis and delay. One can never tell just what will happen to an aneurysm, whether it be true or false, acute or chronic.

The first consideration must be the nutrition of the parts supplied by the affected vessel. Many methods have been devised for determining the value of collateral circulation, but in most cases an elaborate equipment is necessary. If we are able to control the bleeding so that an endo-aneurysmorrhaphy can be done there is practically no danger of disturbing the collateral circulation. In arteriovenous aneurysms, as much as three inches of both artery and vein can be resected without danger because the condition tends to dilate the collateral branches.

Discussion on Paper of Dr. J. L. Campbell

DR. J. CALVIN SANDISON, Atlanta: This is an unusually large collection of patients with aneurysms and represents a lifetime of work on the part of Doctor Campbell. It is an important series because the incidence of postoperative gangrene is very low and the incidence of cure is high.

Of especial interest is Doctor Campbell's use of a

method which involves the laws of growth and behavior of the blood vessels. If an artery is partially constricted at a point, the first branches of the blood vessels coming off just above this point will grow larger, take on more cells, and gradually take over the function of the constricted artery. At the same time sufficient immediate blood supply will pass through the area to prevent gangrene.

Doctor Halstead several years ago made elaborate experiments on animals to determine what material was best for making these partial constrictions. He found that silk would cut through the vessel and the artery would be reestablished. Metal bands would prevent the vessel from becoming normal, but there would be fatal hemorrhage from erosion of the wall of the vessel. Then he tried strips of fascia which proved to be the material of choice for use in producing partial occlusion of major arteries. He predicted that this method could be used in the cure of aneurysms, although he never lived to try it.

Doctor Campbell has amply proved that Doctor Halsted's convictions were well founded. I think that this work of Doctor Campbell's is a classic and should be considered as such.

DR. H. M. BRANHAM, Brunswick: I am very sure that my native town will never erect a statue to me, after I have passed across the river, for my oratory. So I hope you will bear with me. I just want to say a few words in regard to the incident in 1890 to which Doctor Campbell referred. I was a young, struggling doctor then, and am the same now except for age.

The patient was a young man who suffered a bullet wound which bled profusely. By the help of nature and a little work on my part, the hemorrhage was checked, and he began to recover. In four or five days a tumor appeared at the point of the bullet wound. I noticed the bruit and thrill, referred to by Doctor Campbell, and I diagnosed it as aneurysm of the femoral artery.

Not having very much to do, I examined him several ways. I noticed that pressing the artery produced slowing of his pulse, and my recollection is that its rate was reduced from 72 to about 35. The compression of the artery in the other leg had no such effect. It was the most puzzling thing I ever saw. I called in several members of the Georgia Association who happened to be meeting in Brunswick at the time, and I operated on the young man. Getting down to the point of the injury, I passed a ligature around the artery above, and thought I did around the one below, but I looked a little more carefully and found the distal one was around the vein, and a tremendous amount of blood was going from the artery to the vein. When this was checked by compression, that peculiar phenomenon of slowing of the heart action occurred.

I appreciate very much the kind words of Doctor Campbell.

DR. THOMAS HARROLD, Macon: A few days ago

Doctor Campbell wrote me a letter and asked me if I could locate any cases of aneurysm for the occasion of this paper. Unfortunately, on short notice we were unable to locate a patient who had not been operated on. I thought it might be of some interest to see the result of operation, three years afterwards.

(Patient) This negro man says he is forty-seven years old. Three and a half years ago he began to suffer with pain and swelling in his popliteal space. He was scarcely able to walk, and the swelling grew very rapidly. In February, 1930, he consulted a colored doctor in Macon, who then called me, and I saw him in consultation with this doctor, and we diagnosed the tumor as a popliteal aneurysm.

He now walks back and forth to his work, a mile and a half a day, and states he has no real difficulty with his leg. If he does an unusual amount of walking, there is fatigue in his leg, and now that leg is slightly larger than the other one. I think there is about one inch difference in the circumference of his legs. Even at a distance you can see there is a slight difference in the size of the two legs.

Here is the scar. This aneurysm was about the size of a grapefruit, and when we opened it and evacuated the clot we found two definite openings into the popliteal artery, one of them the size of a pencil, the other smaller. We closed them with two or three layers of silk sutures, and obliterated the sac and closed it up tight. He states he is able to do his work every day.

DR. E. A. BANCKER, Atlanta: I wish to call attention to a sign of aneurysm of the aortic arch which is rarely encountered. It is a unilateral engorgement of the superficial veins of the chest and one arm, due to the pressure of the aneurysmal sac upon the deep veins. It is sometimes the only visible sign of aneurysm and is helpful in making a diagnosis in the absence of the other cardinal signs.

DR. J. L. CAMPBELL, Atlanta: Mr. Chairman, I appreciate very much the discussion. Dr. Thomas Harrold's case is quite a nice cure. We always pack these cases by packing in vaseline, and we have the same results as he had. I shall now show some lantern slides illustrating my method of suturing aneurysms.

EFFECT OF TONSILLECTOMY ON DEVELOPMENT OF IMMUNITY TO SCARLET FEVER, AS SHOWN BY THE DICK TEST

Camille Kereszturi and William H. Park, New York (Journal A. M. A., September 2, 1933), determined the effect of tonsillectomy on the development of immunity to scarlet fever by observing whether the children who react positively to the Dick test before the removal of their tonsils and adenoids become immune, when tested six months later. During a period of a year and a half, 492 patients, admitted to the authors' hospital for tonsillectomy and 675 children for other causes, received an initial Dick test.

BISMUTH POISONING IN THE TREATMENT OF SYPHILIS*†

JOHN W. BRITTINGHAM, M.D.
Augusta

Bismuth, a comparatively new addition to the treatment in syphilis, was introduced clinically by Sazerac and Levaditi¹ in 1921, but these observers gave full credit to Robert and Sauton², who first suggested its use in their report of the favorable action of this drug in the spirochetosis of fowls. From this time until the present there has been accumulated voluminous literature on the effects of this drug upon the patient and upon his disease. It has been the consensus of opinion of leading clinicians all over the world, that bismuth is indeed a worthy addition to our therapeutic armamentarium, and that its efficacy in the treatment of syphilis occupies a position between the arsphenamines and mercury. However, it is not the purpose of this study to discuss the relation of this drug to syphilis as much as it is to discuss its effect upon the host.

Nearly every type of reaction that has followed arsphenamines has been described following bismuth, including Herxheimer reactions, dermatoses, blood dyscrasias, arterial embolism and polyneuritis, but by far the most common ones have been stomatitis, gastro-intestinal disturbances, renal complications and febrile reactions, which Gate, Thiers and Cuilleret³ have called "bismuth grippe" or "bismuth influenza." The diversity of reactions is no index to the frequency of bismuth poisoning, because aside from the last four named, reports of the other more uncommon reactions have been conspicuously rare, considering the thousands of doses of this drug which have been given since its introduction. In a review of the literature Beerman⁴ found only 22 cases in which death could have been attributed to the use of bismuth, and five of these were due to intravenous injections.

The dermatoses following bismuth have been discussed recently by Skolnik and Ale-

*Read before the Medical Association of Georgia, Macon, May 10, 1933.

†From the University of Georgia Medical Department, Augusta.

shire⁵ and are undoubtedly among the most unusual reactions. Various types from simple urticaria to exfoliative dermatitis have been described. In our series of 7,500 injections no definite skin disturbances were observed, in which this drug could have been incriminated, other than occasional induration at the site of inoculation. Regarding blood dyscrasias after bismuth there have been several reports of agranulocytosis, the most recent being that of Levy⁶. Bonilla⁷ was of the opinion that bismuth favors hemorrhage from parts already predisposed to hemorrhage. There have been a few cases reported of polyneuritis and herpes zoster after bismuth, but Becker⁸ in reviewing them contended that the former condition had not been established as a clinical entity, because most of the patients described were receiving mixed arsphenamine and bismuth treatment.

It is beyond the scope of this paper to discuss all of the wide variety of complications following this type of treatment. Such a discussion would require hours, so this report is essentially a description of only those reactions observed at the Out-patient Department of the University of Georgia Medical Department. Definite evidence of bismuth poisoning was seen in 36 patients, some of whom manifested more than one toxic symptom. Only four types of reaction were observed, and they shall be described in the order of their occurrence.

Stomatitis was observed in 30 patients. This might seem like a high incidence for this complication, but it is probably not extraordinary when one considers the fact that 2,550 patients comprise the group observed. Stokes⁹ and many others have warned of the higher incidence of this reaction in the presence of pyorrhea, dental caries and bad dental hygiene. The same care of the mouth and teeth is urged as during mercury administration. Our group of patients was made up chiefly of colored laborers, and it might even be said that nearly half of them had some form of dental caries before the institution of bismuth therapy. Some of our patients complained of pain only in the region of a carious tooth after bismuth, and it was of interest to note that most of these were able to continue bismuth after extraction of the bad tooth. These 30 cases of true stomatitis had many features in common, the first of which was the rapidity of the appearance of symptoms after injection. This was probably due to the use of a water soluble preparation which contained 37.5 per cent metallic bismuth, and which is absorbed more quickly

than bismuth in oil. The initial symptoms were always pains in the teeth and jaws, and appeared as early as five minutes after injection in several patients. In these it can be assumed that particles of bismuth probably entered the circulation by means of the capillaries. Twenty-one of the total number of patients experienced pain about three hours after treatment, and only two stated that their pain did not appear until the day following injection. The pain continued three to four days in about half the cases, but in the other patients it was present for about a week. The injections were given at weekly intervals in all cases. In two patients pain and swelling of the tongue were more conspicuous than involvement of the gums. All the patients manifested varying degrees of salivation.

The so-called bismuth line was certainly not a constant finding, but was seen in most of the cases. It consisted more of irregular, steel gray and sometimes patchy areas of pigmentation at the gum margins, on the hard and soft palate, and any part of the buccal mucosa. It is not a true line like that of lead poisoning. In some cases the pigmentation was a dirty brownish color. All cases presenting pigmentation manifested a peculiar fetor somewhat similar to hydrogen sulphide. Levaditi, Manin and Howard¹⁰ demonstrated that after injection bismuth could be found in the circulation in the form of an oxide. In the presence of hydrogen sulphide which is always an accomplishment of decay this bismuth oxide is changed to a brownish bismuth sulphide. Endothelial cells of the buccal mucosa are further damaged by their attempt to absorb this and more necrosis occurs. According to Sacher¹¹ this is the mechanism in all cases of stomatitis, and presupposes some degree of dental caries or too large a dose of the drug. The fact that the condition of the teeth must be one of the chief predisposing factors in the production of this reaction is borne out by the comparative rarity of bismuth stomatitis in private patients. Most of the reactions appeared after at least four weekly doses had been administered, but in seven patients toxic symptoms appeared after the first dose. In the latter group previous dental caries was most marked. Decreasing the dosage by as much as 50 per cent did not prevent recurrence of stomatitis until the teeth had received proper care.

Gastro-intestinal disturbances were observed in three patients one of whom also had stomatitis. Each of these patients complained of a watery diarrhea, with as many as twelve bowel evacuations daily in one case, and frequent griping abdominal pains. The stools were bloody in one case. This symptom appeared about 48 hours after treatment in all of them, and continued for two or three days in each. All of these patients had received rather long courses of bismuth before eliciting toxic symptoms, since they were not receiving alternating courses of arsphenamines or any other drug. This complication occurred after the 6th, 10th and 12th treatment respectively in the three patients. Here again, however, we might

be justified in presupposing some bowel difficulty before treatment as an etiologic factor, because two of these patients have well tolerated further courses of bismuth after rest periods and improved bowel routine. The griping pains were similar to those caused by other heavy metals, such as lead or mercury, but were less intense.

Signs of renal irritation were elicited in three patients. One of them was not admitted to the hospital because he complained only of urinary frequency on the day after his first treatment. He also had mild stomatitis. The other patients were admitted to the University Hospital. One was a 22 year old colored girl who noticed sudden weakness and a nasty taste, which she could not describe, almost immediately after her second injection of bismuth. She was admitted to the hospital about three hours later acutely ill. The chief complaint was an extremely weak sensation and general malaise. There was no fever and the general physical examination was essentially normal. Urinalysis on the day after admission revealed albumin 4 plus and many granular casts. Phthalein excretion was 55 per cent in two hours. Albumin and casts were found in the urine for four days, and then urinalyses were normal. There was steady improvement and the patient was discharged eight days after admission apparently well. Diuresis from water soluble bismuth has been described by Hanzlik and Bloomfield¹² and their co-workers. Stockton¹³ later observed that active diuresis following bismuth injection was always accompanied by an increase of blood chloride and an increase of urea in the urine, and even recommended this drug in water soluble form for use as a diuretic in some cases. Mild forms of renal irritation from bismuth are probably much more common than we realize, because patients rarely complain of a slight increase in urinary frequency.

Our other case with renal complications was more tragic, because of a fatal termination. She was a negro woman of 24 years, who noticed severe stomatitis after receiving her second dose of bismuth. The glossitis progressed until the tongue was more than three times its normal size and actually prevented closing of the mouth. She was admitted to the University Hospital on the day after treatment and in the meantime had been voiding very small amounts of dark amber urine. Anuria gradually developed, general anasarca appeared and the patient resembled in every way the clinical picture of bichloride of mercury poisoning. Sodium thiosulphate was administered daily, but the course was progressively downward until death occurred six days after the injection. Necropsy revealed, besides the enormous swelling of the tongue, moderately large swollen kidneys like those of nephrosis. It is planned to report this case more in detail at a later date. Apparently, glossitis adds to the gravity of the prognosis in these cases, because the writer has found several in the literature in descriptions of fatal bismuth reactions. The patient described by Pulawski¹⁴ was very much like ours, and at

necropsy parenchymatous nephritis was seen. Experimental bismuth nephritis has been produced in rabbits by Pasteur Vallery-Radot, M. Derot and P. Gauthier-Villars¹⁰.

The last type of reaction observed at our clinic was of special interest. Two patients after their first treatments complained of headache, backache and general malaise about two hours after bismuth injection. Clinically they resembled influenza in every way, but their temperatures never exceeded 100 and became normal in three days. Leukocyte counts were normal. At first it was thought that true influenza was present as a coincidence, but after finding the report of similar cases by Gate, Thiers and Cuilleret³ bismuth reaction seemed more likely as an explanation of them. These observers are responsible for the term bismuth grippe, and have considered it as evidence of metallic sensitization. They had seen similar reactions to mercury injections. Their patients as well as ours were able to continue bismuth therapy. Our patients were given smaller doses of the drug for a few weeks and their's were treated with the same dosage, but at less frequent intervals. The ability to continue bismuth in this manner was explained by a process comparable to desensitization.

Summary

Evidence of bismuth poisoning was seen in 36 patients.

Thirty patients with stomatitis were observed.

Dental caries in some form was present in nearly every patient with stomatitis.

Extraction of carious teeth permitted further bismuth therapy.

Three patients with gastro-intestinal disturbances following bismuth were seen.

Three patients presented signs of renal damage, and one had a fatal termination.

Two patients manifested signs of metallic sensitization or "bismuth grippe."

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Discussion on Paper by Dr. Jno. W. Brittingham

DR. SPENCER KIRKLAND, Atlanta: So many articles have been written on the great advantage of the use of bismuth in the treatment of syphilis, the reasonable safeness of this medication and the success in many cases, where the arsenical preparations fail or result in such distasteful reactions to render arsphenamine dangerous. An article in the *Paris Medical* devoted to recent advances in therapeutics, stated that the most interesting therapeutic acquisition recently is the use of bismuth in the treatment of syphilis.

Most physicians in reporting cases and giving a resume of results obtained with a drug desire and do report the successful angle. Many surgeons mention their ideal results only and pass over the numerous failures and unfavorable ones. One obtains far greater aid from papers such as Doctor Brittingham has presented today, where an opportunity is given to see the perverse and gloomy results rather than the rosy successful angle.

Some years ago, so many severe toxic effects were obtained from bismuth it became necessary to abandon its use temporarily. During the war pigmentation of gums was seen following the application of bismuth paste to open wounds. The toxicity was thought to be influenced by the rate at which the metal entered the system. By chemical analysis, after the administration of bismuth, the drug was demonstrated to be present in the blood, bile, urine, saliva, sweat, feces and cerebrospinal fluid. Inasmuch as this is the case, it is not difficult for one to see the possibility of the numerous reactions, described so fully by Doctor Brittingham.

I wish to congratulate Doctor Brittingham on his timely and most complete paper.

DR. L. MINOR BLACKFORD, Atlanta: In my experience with bismuth during more than four years in the colored division of Grady Hospital, treating mostly patients with cardiovascular lesions. I have not noticed as many cases of bismuth poisoning as Doctor Brittingham has.

About four years ago I saw two cases resembling psoriasis. I did not get particularly excited about them until a couple of years later this report of psoriasiform lesions due to bismuth came out in the *Journal of the A. M. A.* I have had two more cases since then. I am quite sure that potassium iodide has caused more skin trouble among my patients than bismuth. The dermatoses, then, seem due to sensitivity on the part of the patient rather than to the toxic properties of bismuth.

I was surprised to hear that jaundice had been

attributed to bismuth. It has become more or less routine at the hospital to turn over to me jaundiced patients with syphilis, whether the jaundice is due to syphilitic hepatitis or to arsenic poisoning. So far the jaundice has cleared up under bismuth therapy.

I cannot recall offhand but two cases of stomatitis. One of these patients received twenty injections of bismuth in quick succession from another physician just before beginning treatment by me. A few weeks later, bismuth was resumed without trouble. A child with congenital syphilis who during her second course began to vomit immediately after the injection. She stopped eating breakfast before coming to the clinic and has not vomited any more. Several others have vomited immediately after one injection and some seem to feel better if they postpone breakfast until after the injection. Most of my patients, however, get to the clinic the best way they can, receive treatment and promptly get back to work,—if they have any work.

Renal insufficiency developed in one patient with severe hypertension after ten months of fair comfort under bismuth treatment. He died a cardiac death a few months afterwards.

There are two possible explanations of the fact that Doctor Brittingham has found more cases of bismuth poisoning than I:

1. He has had more assistants and more time and he has himself perhaps been more careful in looking for it.

2. Although we have both used a water-soluble bismuth, they have been of different brands. I have used bismuth sodium tartrate (Searle).

On the basis of some recently published experiments, and of my own experience with 100 doses of the preparation he has used, I think the second explanation is the more valid one. However, between us, more than 22,000 injections of bismuth have been given with only one case of serious poisoning, and this proves that bismuth in proper dosage is a safe drug.

Doctor Brittingham's paper should stimulate the wider use of the latest addition to our armamentarium in the fight against syphilis. At a future date I hope he will give us a report of his therapeutic results.

DR. JOSEPH YAMPOLSKY, Atlanta: I am sorry Doctor Brittingham had so many unfortunate reactions. We have not had that experience in Atlanta. I believe there is a slight reaction from any drug, but I believe it is so general that bismuth has taken the place of other drugs in syphilis, especially in children.

I am more worried about the amount of bismuth that will remain in the buttocks of the ladies and gentlemen, because the drug is not absorbed as fully as others. Possibly in injecting bismuth they may have hit the veins.

We have had good results, as I said, and I believe that bismuth is probably one of the drugs that will be used more and more as we understand more about

the use of bismuth in syphilitic therapy. Doctor Blackford has had the experience of using it, and has had good results. We should again remember that there is a possibility of bad reactions in any patient from any drug, and I think that we owe Doctor Brittingham a vote of thanks for bringing this fact to us, because when a new drug comes out people use it indiscriminately. We should know the good and bad results, and use it discriminately.

DR. JOHN W. BRITTINGHAM, Augusta: I want to thank Doctor Blackford and Doctor Yampolsky for their discussion. Doctor Blackford called attention to the fact that results might be determined by the product used. The product that we used I know contains considerably more metallic bismuth than that used by Doctor Blackford, and perhaps contains a little too much. That in itself might be a reason for our cutting down on our dosage. The real theme of my paper, and the object of presenting it, was that my individual belief is that bismuth reactions are more common than we are led to believe. If we question our patients a little more closely about how they felt after the last treatment, we can find many reactions that we would not pick up otherwise. There must be more of these reactions than are reported in the American literature. I presented it chiefly on account of the contention that they are more common, all types, than we have been led to believe.

Doctor Blackford mentioned jaundice. It is probably like many of those other symptoms that I have mentioned in passing, because many of them that have been reported are probably not due to bismuth at all. Many of them have been reported in cases in which both drugs have been used simultaneously and the arsenical might have been at fault.

If we simply follow the work of Bloomfield, Hanzlik, Stockton, and many others on water-soluble bismuth, we would be forced to admit that renal irritation from this drug is more common than we have thought. I did not refer to pain in the buttocks because I thought of that as a local bismuth reaction rather than bismuth poisoning.

Regarding Doctor Yampolsky's statement about climate, I feel that it has nothing to do with our result. As to the incidence of stomatitis in certain types of patients, I have called the attention of students and others at our clinic to its increased prevalence in patients with preexisting bad oral hygiene. In our thirty cases, most of them appeared in this type of mouth.

I am glad Doctor Yampolsky reported his opinion about the buttocks, because some people are liable to be afraid of water-soluble bismuth after such statements as have been made here this afternoon. It can be demonstrated by x-ray that oil soluble bismuth remains for weeks where it is injected, and that in itself might be an argument for using more water-soluble bismuth.

OPERATIVE TECHNIC AND POST-OPERATIVE TREATMENT OF FULMINATING APPENDICITIS*

JOHN T. MCCALL, M.D.

Rome

I am not beginning this paper with the usual apology offered when discussing appendicitis, in fact a discussion of fulminating appendicitis needs no apology. It is the abdominal rattlesnake. It gives a sharp warning and, if not treated promptly, a high mortality or a prolonged and painful convalescence.

There has been a great increase in the number of ruptured appendices during the past two years due no doubt to the present economic conditions. Dr. L. K. Viko, health commissioner for Salt Lake City, states that perhaps half of the sixty-eight deaths caused by appendicitis in Salt Lake City during 1932 could have been averted if it were not for the complications of delay. Even in normal times almost twenty per cent of inflamed appendices have already ruptured when they reach the surgeon. Unfortunately some one once must have promulgated the theory that an appendix never ruptured in less than 48 hours from the onset yet most of my cases were brought to the hospital and operated upon within twelve to thirty-six hours after the onset. They sometimes follow an acute gastroenteritis or colitis. In either case the attending physician is not to blame for the condition found. The patient is very ill upon entering the hospital and an operation is imperative. In a goodly number of cases a general peritonitis has already begun—always a local peritonitis. A diagnostic sign recently described is the absence of the Cremaster reflex.

On opening the peritoneal cavity it is congested and if the operation is late, distended coils of intestines are found with a dirty sero-purulent exudate collected in the vicinity of the appendix. The appendix is usually greyish black in color and adherent to the omentum. Infrequently a fecolith is found protruding through the wall somewhere near

*Read before the Medical Association of Georgia, Macon, May 10, 1933.

the base or dense adhesions have produced an acute angulation near the center causing a necrosis of the distal half.

In a recent survey of the state the following questionnaire was sent to all the larger hospitals:

1st—Number of gangrenous appendicitis cases in the past year.

2nd—Length of stay in hospital.

3rd—Death rate.

Twelve responded, showing an aggregate number of two hundred and fifty-five with a death rate of 19.2 per cent. The average stay in the hospital was 17.2 days. Some statistics recently given out by J. M. T. Finney disclose two hundred and forty cases of ruptured appendicitis with fifty-three deaths or a mortality rate of twenty-two per cent and with an average stay in the hospital of thirty days.

About a year ago, in an operation for appendicitis, the appendix was found to be sloughed entirely away from the cecum, leaving no base to tie, so a pezzar catheter was inserted and fastened with a light purse string suture, the convalescence was so satisfactory that I decided to try it again and the following technic was carried out.

If the pre-operative diagnosis has been made, a modified McBurney is the incision of choice, cutting across either the upper or lower half of the muscle fibres, depending upon whether the pathology lies high or low in the abdomen. If a right rectus incision has been made, then the drainage should be carried out through a stab wound near the right iliac spine: with a small drain in the lower angle of the incision or a severe sloughing will occur due to the ever present infection. The appendix is removed with as little trauma as possible, clamping close to the base and treating the stump with iodine or phenol and alcohol. The clamp is then removed and the opening in the cecum is dilated with an artery forcep and a size fifteen pezzar retention catheter inserted. A cigarette drain is then inserted in the pelvis or the appendix pocket or both and the incision is partly closed. Two hundred cubic centimeters of warm normal salt solution is then introduced into the cecum through the catheter and the catheter is clamped for two hours. The clamp is then removed and drainage encouraged for a like period. This is repeated at two hour intervals for the next forty-eight hours or until sufficient fluid can be given by mouth. After the forty-eight hour period the catheter is left, open until the morning of the fourth day when two ounces of a saturated solution of Epsom salts is instilled and the forceps applied until there has been a thorough evacuation. The catheter is then removed. The Penrose drainage tube is removed as your judgment dictates. In not a single instance has there been a fecal fistula following this procedure, which I think is due to two factors—first the thorough cleansing of the intestinal tract and second to the circular muscle fibres at the base of the appendix. The morbidity of these patients was indeed gratifying. Very little abdominal

distention, no nausea and no gas pains occurred and in fact the patients were much more comfortable than those following ordinary operation for acute appendicitis.

Although the number of patients in which this technic has been used is too few for statistical purposes, the results have been so gratifying that I am constrained to pass it on, that you might give it a trial. Since last May we have had twenty-three cases, these twenty-three cases have ranged from nine to sixty-five years of age and with the exception of one case that I will report later the average stay in the hospital was 12.7 per cent days with one death. I am reporting four of these cases.

Case One: A thirteen year old boy was seen between five and six days before operation. At that time he had been complaining of what appeared to be a simple diarrhea with frequent watery stools and occasional brief colicky pains. The abdomen was entirely relaxed and there was no definite tenderness. He was treated for two days and the morning previous to the attack he was apparently well. That afternoon he was taken with severe abdominal pain, nausea, vomiting and the abdomen was very rigid and tender. It was difficult to attribute the condition to anything but an acute perforation although the child had been entirely comfortable up to the moment of this attack. He was admitted to the hospital at 4:30 P.M. with a temperature of 101.4 degrees, pulse 88, respiration 22, W. B. C. 19,600 with 86 per cent polynuclear leucocytes, the urine was negative. The diagnosis was acute appendicitis. The usual McBurney gridiron incision was made and the finger inserted. The cecum was found to be plastered to the posterior peritoneal wall so the oblique muscles were cut across at both angles that the cecum and appendix might be delivered. The intestines were distended and inflamed and there was free sero-purulent fluid in the peritoneal cavity. The appendix was buried in adhesions on the posterior wall, lying retrocecal. The distal half was found to be gangrenous with a fecolith protruding through the wall about 3 cm. from the tip. The gangrenous area had to be removed piece-meal. The meso-appendix was clamped and ligated. The appendix was clamped and removed about 1 cm. from the base and the raw area was painted with Picric acid solution. The lumen of the base was then dilated and a pezzar catheter inserted into the cecum. Three Penrose drainage tubes were inserted through the lower angle of the incision, one deep into the pelvis and the others in the rectocecal space. The peritoneum and fascia were partly closed by interrupted stitches in the upper angle. Two ounces of warm normal salt solution was then introduced through the catheter which was clamped. Twenty-four hours later the normal salt solution was changed to 10 per cent glucose solution. On the afternoon of the fourth day 1 ounce of saturated solution of magnesium sulphate was introduced and the tube clamped—three hours later a soap suds enema was given with good results. Twenty-four

hours after the salts the catheter was removed. Morphine was given in moderate quantities at intervals. At no time following the removal of the catheter was there fecal drainage. There was, however, purulent drainage for about two weeks. The patient was up in chair on the ninth day and was dismissed on the fourteenth day.

Case Two: A nine year old child was taken ill on Saturday morning, July 9th, about 7:00 o'clock. The only history which was given prior to the attack was loss of appetite and indigestion. Upon inquiry it was found that she had been eating bananas late in the afternoon before her attack. The complaint was pain in the abdomen which seemed a little more severe on the right side. Upon examination there was no apparent rigidity, no fever, no nausea. The pulse rate was eighty per minute. The attending physician felt that the condition was simply a gastrointestinal disturbance but gave the patient the benefit of the doubt and ordered that no food or purgative be given. On that night the patient felt a little uncomfortable in the abdomen. A low soda water irrigation of the bowels seemed to relieve the distress and the patient slept more comfortably all night. On Sunday morning the patient was feeling much better with very little pain and soreness in the abdomen. Sunday afternoon there was still no rigidity and no nausea, but considerable soreness was present. She began to call for food which was not given. She had a very comfortable rest on Sunday night, only waking one time. On Monday morning she awoke with severe pain, nausea and vomiting. There was a pronounced abdominal rigidity, a temperature of 102 degrees, a pulse of 120 and a general appearance of prostration. A white blood count showed 18,000 leucocytes and polynuclears 85 per cent. The abdomen was opened through a McBurney gridiron incision. A greatly distended appendix was found, necrotic its entire length, which was probably due to an acute angulation near its base. Although there was no perforation there was the usual accumulation of sero-purulent fluid. Part of the omentum had to be removed with the appendix. A pezzar catheter was inserted into the cecum through the appendiceal opening and one Penrose drain inserted in the pelvis. The incision was only partly closed and 250 cubic centimeters of normal salt solution was injected through the tube and the patient placed in bed in a Fowler position. The same treatment was carried out as in the previous case and the temperature dropped to normal within 48 hours. The patient was dismissed on seventh day with only a small amount of purulent drainage which lasted for about one week.

The third case played havoc with the average of hospital days. Mrs. J. L., a farmer's wife, 65 years of age, had suffered with indigestion for many years. She had severe abdominal pain and nausea 48 hours before entering the hospital and was first seen by her physician 24 hours after onset and advised to go to the hospital but refused. She was seen again the following afternoon at which time she stated that she

was comfortable and did not need an operation. That night she became worse and came to the hospital upon her own volition. At that time there was a beginning general peritonitis. The temperature was 101 degrees, pulse 120 and respiration 26. Urinalysis was negative while the white blood cells numbered 17,000 with 88 per cent polynuclear. Under gas-ether anesthesia a right rectus incision was made revealing distended red coils of intestines. The appendix was found low in the pelvis laying in a bed of sero-purulent material with a rupture near its center through which a large fecolith was protruding. The appendix was removed and a small pezzar catheter inserted into the cecum, a large Penrose drain was inserted low in the pelvis and both drain and Cecostomy tubes were brought out through a stab wound at McBurney's point. The right rectus incision was closed in the usual manner. The same post-operative treatment was carried out except that the tube was left in longer than usual, changing the solution used from time to time using glucose, citrocarbonates and Harts Elixir.

The patient had a very stormy convalescence. The infection was so virulent that the right rectus incision broke down for its entire length and all the fascia covering the muscle sloughed away. She remembered nothing of the first ten days in the hospital and I believe was one of the sickest patients that I have ever seen to recover. She remained in the hospital four and one-half weeks and when she left there was still a large granulating area at the site of the incision.

The fourth case was W. R. M., a farmer, aged 29 years. On the afternoon of March 20th he was taken with severe abdominal pain. This pain continuing, he drove several miles to see his regular physician who prescribed for him and advised that he go home and to bed. He was not seen again until the morning of the fourth day when another doctor was called in and sent him to the hospital, with diagnosis of gangrenous appendicitis with peritonitis. A gangrenous appendix was found plastered to the mesentery of the ilium, the mesentery infiltrated with gangrenous areas, there was also a marked peritonitis.

Thirty-six hours after the operation patient's temperature dropped from 103 degrees on admission to 98 degrees and he was perfectly comfortable, had no distention nor nausea and was requesting food. His condition remained good for forty-eight hours, after which he developed an acute dilatation of the stomach with abdominal distention, his temperature rose rapidly and this continued until his death on the fifth day after operation. Autopsy was not obtained, but I believe that death was due to a thrombosis of the mesenteric vessels and necrosis of the corresponding loop of ilium.

Conclusion

The death rate in appendiceal operations is in direct ratio to the number of gangrenous appendices found.

Enterostomies and cecostomies have been advocated in the past but only in the late cases, following ileus, obstruction, etc., with very unsatisfactory results. The method that I have just described is both quick and simple and if used in all gangrenous cases I believe the results will be gratifying indeed.

Discussion On Paper by Dr. John T. McCall

DR. WILLIAM L. COOKE, Columbus: Mr. President and Gentlemen: I enjoyed Doctor McCall's paper very much. More so because I have been using this method of treating these cases for the last six or seven years. The process by which I arrived at this treatment might be called one of surgical evolution.

Thirty-two years ago when I was in my internship, we had a great many cases of appendiceal abscess. Several of these cases developed fecal fistula. I noticed that every one of the cases that developed fecal fistula got well.

The first step in my reasoning was, if some of these cases, or the majority of them, get well, where a fecal fistula develops, why wouldn't it be wise to make a fecal fistula in cases that had gotten into trouble? I put that part of the procedure into practice, and saw several remarkable recoveries.

My next step in reasoning was that if these cases got better where a fecal fistula was deliberately made, after they got into trouble, why wouldn't it be wise to produce a fecal fistula, or rather an enterostomy, before they got into trouble, at the time of operation? So I began practicing practically what Doctor McCall has reported.

That was six or seven years ago. Since then my mortality in cases similar to the ones here reported has dropped about fifty per cent. It is a rare thing that we ever lose one now, since we have adopted this method of treatment.

There are some few criticisms—not criticisms, but rather differences in technic that I want to mention. In the first place, I do not use a pezzar catheter, or a mushroom catheter. I use a simple, straight, soft rubber catheter, from 16 to 20 in size. If it is possible, I always invert the stump of the appendix along with the catheter. Where the inversion is done, there is never any leakage when the catheter is removed. Where it is impossible to invert I sometimes get a little leakage of fecal matter for, a few days after removing the catheter.

In the second place, the Doctor mentioned putting fluids into this catheter. I did that at first myself, but I found that in a certain number of cases where this was done seemingly the symptoms got worse after the fluid was introduced, so I stopped that. We all know that the less the gastro-intestinal tract is interfered with in these cases the better off they are. I will refer to that again later.

In the third place, I never would introduce any magnesium sulphate into the intestine in cases of this

kind. I believe that I would get as bad results by doing this as I used to get by pouring salts into them after the operation.

In the fourth place, I leave the catheter in a little bit longer than Doctor McCall does. Very frequently I leave the catheter in a week or ten days, according to the symptoms of the patient.

Another thing is that where there is a very violent peritonitis discovered at the time of the operation, I deliberately, after doing my first enterostomy, go to the left side of the abdomen; make another incision, and pick up another loop of jejunum and introduce another catheter, making a double enterostomy.

Another difference is that I hardly ever use any sutures in these cases. I use a muscle splitting, or McBurney's incision, and very rarely put in any stitches. I have noticed that when I did, I almost invariably got a severe sloughing of the aponeurosis, as the stitches simply serve to imprison the secretions.

All of these cases need nourishment and a great deal of fluid to keep the body fluids at the proper level; and to accomplish this purpose, I find that venoclysis with a ten per cent glucose in normal salt is the best way to bring this about.

DR. KENNETH MCCULLOUGH, Waycross: Mr. President and Gentlemen: This is, to my notion, a very timely paper, particularly in view of the fact that in the past year there have been so many cases of this type arising.

I was hoping Doctor McCall would dwell a little more on the diagnosis of this acute type of appendicitis, and I should like to ask him if he has made any observations regarding its association with influenza or capillary bronchitis. The operative technic as outlined by Doctor McCall in his paper is one which permits free and adequate drainage direct from the intestinal tract, and bears out the old statement that a fecal fistula has saved many a life. I have personally had little or no experience in carrying out this particular type of technic. My chief, when I was an intern, believed in free draining. He would put in two or three tubes, where someone else would put in one. His mortality was very low compared with a great many others, and the technic I have tried to follow has been attended by a fairly gratifying low mortality.

With regard to fluids, with salt solution, I believe glucose either under the skin or in the vein is the best way to get it absorbed.

Just one word about the peculiarities of this fulminating type of appendicitis. It does not follow any rule. Two weeks ago tonight I was called to see a patient at ten o'clock who was taken sick at four in the afternoon with a slight pain. His family doctor saw him again at six. His pulse and temperature were normal, and he had no nausea. At ten he developed a severe pain on the right side, and rigidity was beginning. His leukocyte count was 9,000 temperature 99, no nausea, no vomiting. He had a history of sore throat and cold the week previous.

This man was operated upon immediately, and the

appendix, while not ruptured, contained a great deal of pus and was distended, tied down. This case is one of a great many that have been admitted to both Ware County and the Coast Line Hospitals at Waycross, and all bear out the same thing, that you cannot pay any attention to the leukocyte count and you cannot pay any attention to the temperature, but if they have had a cold and have a pain on the right side and are nauseated and begin to be rigid, they had better be opened up under spinal anesthesia or gas.

DR. JOSEPH C. READ, Atlanta: This is a very interesting subject to all of us. Although our experience with this technic has been limited, there are a few points I should like to bring out. After a diagnosis of acute fulminating appendicitis is made, we almost invariably make a McBurney incision. If we need more room we can easily extend it as far as the mid-line by cutting into the rectal sheath. We have been able to resect the left ovary in a few cases of mistaken diagnosis where we found that we were dealing with a ruptured ovarian cyst. We deliver the cecum with two Allis forceps. The cecum is rotated with one forceps, and after two rotating movements the appendix is brought into the field. The finger is passed down to locate the base of the appendix, if there are numerous adhesions. In using these Allis forceps, it is an easy task to keep small bowel from presenting into the wound. We try never to handle small bowel if we can prevent it.

No matter how badly diseased or gangrenous the appendix, if we cannot demonstrate a definite rupture we do not drain the abdomen. If we have a case of fulminating appendicitis, we treat all of them post-operatively, as if they had a ruptured appendix, that is, we prop up the head of the bed, put a hot flaxseed poultice on the abdomen constantly, use morphine, give adequate saline and glucose subcutaneously and intravenously, with nothing by mouth. In the event that the patient becomes distended and shows evidence of the localized peritonitis spreading, we have had good results in putting a Levine tube in the stomach and leaving it for two or three days. This will prevent an acute dilatation of the stomach.

At this time I can remember only one case in the past two years of this type which we have lost, and when this patient was opened we aspirated two quarts of thick pus from his peritoneal cavity. He had been extremely ill three days when seen by us.

DR. WM. S. GOLDSMITH, Atlanta: I think all papers in our meetings on acute appendicitis are valuable contributions. I emphasize "acute" because I am not strong on so-called chronic appendicitis. I am glad my appendix has been removed as I might have been caught in Rome and fallen into the hands of my good friend McCall, and my condition may have tempted him to place a tube in my cecum.

I have an open mind but at this time cannot subscribe fully to indiscriminate cecostomy. These cases of fulminating appendicitis, as a rule, get well without deliberately producing a fecal fistula. In some of

them, the stump of the appendix sloughs away, with the immediate development of a fistula, which causes much anguish with the patient and the family. As a general rule these fistulas get well if too much is not done for them.

Two years ago I read a paper on "Acute Appendicitis in old People." The main question in these cases was the recognition of the disease and not to wait until an abscess formed and chronic sepsis prevailed. Patients after middle life do not have the fulminating type as occurs in young adults and it is probably for this reason that the appendix undergoes a necrosis and abscess before it is diagnosed.

I must take sharp issue with Doctor McCullough about the right-side pain and rigidity in these influenza cases. Notwithstanding suspicious blood counts, the possibility of bronchial irritation, pulmonary and pleural complications should be absolutely ruled out before operation. Twenty-five years ago I was called one day to operate on a very sick livery stable negro. Those of you present old enough will recall the type—poorly nourished, chronic alcoholic, and altogether dissolute in habits. He had the appearance of a very sick boy, and with confidence in my house-surgeon, I ordered the anesthetic to begin. His blood count was high, there was extreme rigidity in the right side, and the information given me pointed to acute fulminating appendicitis. When the appendix was exposed there was absolutely no sign of inflammation, but it was removed and the wound closed without drainage. His chest was then examined and it was found that he had a pronounced lobar pneumonia. You can be assured that this little negro received my closest personal attention, and finally got well.

DR. A. J. MOONEY, Statesboro: I want to subscribe to Doctor McCall's most excellent paper. There are certain instances where the creation of a fecal fistula is advisable. I have seen them break through themselves, where the ligature around the base of the appendix has come loose, but I never saw one that failed to get well. It takes judgment that I am sure comes with experience, such as Doctor McCall and Doctor Cooke have, to determine the proper case in which to put the catheter into the cecum.

There is one feature that I want to call your attention to in discussing fulminating appendicitis, and that is intestinal paresis. On the third day when we see the patient very tympanitic, features drawn, vomiting, we know we have a case of intestinal paresis. We know that studies by Williams of London, England, have proven that many cases of intestinal paresis are due to a gas bacillus infection. I have used perfringens serum, worked out by Williams of London, in combating gas bacillus infection, and it gives splendid results in these cases of intestinal paresis, in fulminating appendicitis, used early and in big doses. The dose recommended on the package is entirely too small. They recommend 80 units, a maximum of 90. I have used 2500 units at one time, and I believe that is why we get results.

DR. JOHN T. MCCALL, Rome: I thank these gentlemen for their free discussion of the paper.

Was glad indeed to know that Doctor Cooke had been using a somewhat similar method for so long a time. As I stated in the paper these patients show a much flatter abdomen than those following a simple appendix operation.

Most of these cases need no laxative, but if they do I see no reason why magnesium sulphate should not be used.

I do believe that some of our most serious cases follow an epidemic of influenza.

THE MANAGEMENT OF CHRONIC ARTHRITIS*

GUY J. DILLARD, M.D.
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According to Osgood's house to house survey in the state of Massachusetts, it is estimated that there are four million cases of so-called rheumatism in the United States. Obviously, this great number of arthritics imposes an economic burden upon this country. For example, in 1931 the United States government paid to ex-service men over ten millions of dollars in compensation caused by arthritis. This constitutes 6.4 per cent of all beneficiaries of the veterans administration and is second only to heart disease.

The organization of the American Committee for the Control of Rheumatism in co-operation with European Commissions is one of the greatest steps ever taken to rid humanity of a painful chronic disease and an excellent gesture in the prevention of economic loss. Further, the American Commission has suggested that the term chronic arthritis signifies two types, namely, atrophic and hypertrophic arthritis. This discussion will be confined to this group. At the present time the classification of arthritis, as found in various essays, is in a state of chaos, and the less said the better until something more definite is known.

You and I well know that the treatment of chronic arthritis is not sufficiently systematized and that the general physician's ideas of the different methods of attack are vague and vary. Moreover, the idea is prevalent that practically nothing can be

done for arthritis. Ober² admits that our attack is inadequate. He states further that our results are better today than they were ten years ago. This is because physicians are becoming more interested in arthritis, although general interest among the profession is still lacking to a great degree. Pemberton³ is of the opinion that there are few other chronic diseases for which more can be done and adds that it is tragic to realize that arthritics must approach the grave in wheel chairs merely because information is not yet sufficiently widely diffused.

It is common knowledge that there are certain predisposing factors in arthritis, and if we treat this disease in the light of present day preventive medicine, we will recognize these factors and relieve our patients before the chronic stage is reached. Among these factors are the extremes of weight, the malnourished and the obese, which Osgood¹ defines as human documents one and two. His enlightening description in part follows: a tall, ptotic woman of thirty-five weighing less than one hundred pounds. Lineaments of former beauty and happiness discernible. Present disfigurement and discouragement only too evident. Eminent lawyer, overweight, overworked and constipated. Such factors are frequently brought about by improper balancing of food and metabolic disturbances.

Matz⁵, in an analysis of 450 ex-service men, finds that exposure and trauma are the chief predisposing factors. Millard Smith⁶, in a study of the etiologic factors in 102 cases of atrophic arthritis, also states that physical and emotional trauma must be considered seriously as playing an important role in this disease. That trauma or over-use is a factor in hypertrophic arthritis, particularly of the spine, to my mind cannot be doubted. But what happens after trauma is not known, unless the traumatized area acts as fertile soil for bacteria. It is to be remembered that many people harbor multiple infections and multiple traumatized joints with bone proliferation without symptoms of arthritis.

The sum total of the commonly suggested predisposing factors are weight variations, poor body mechanics, exposure, trauma, poor hygiene and metabolic disturbances. These factors are long in evidence before the precipitating processes, such as infections, etc.,

*Read before the Medical Association of Georgia, Macon, May 11, 1933.

become operative in the production of joint lesions.

The theory of focal infection as a cause of arthritis was first popularized by Billings⁷ in 1912. Since this date the pendulum has swung back and forth with more or less enthusiasm till today we recognize infection as a cause of atrophic arthritis and doubt its existence in hypertrophic arthritis. Information, however, does not reveal beyond doubt that infection is the only factor in the atrophic type, nor degeneration the only factor in the hypertrophic type. Cecil⁸ is convinced that hypertrophic arthritis is primarily a degenerative or senescent process. Opposition to this view will doubtless be encountered in the future.

Efforts to isolate the responsible organism in this country seem to warrant the opinion that the streptococcus is the offender. The streptococcus has been recovered from the arthritic in a high percentage of cases by Cecil, Nicholls, Stainsby⁹, Wetherby, Clawson¹⁰, Burbank¹¹, and others. Cecil and his co-workers were able to isolate streptococcus from the blood of chronic arthritics in 61 per cent of the cases, Wetherby in 50 per cent and Burbank in 94 per cent of stool cultures. On the other hand, data which fail to confirm these reports may be noted.

The organs that most commonly harbor infections are: Teeth, tonsils, sinuses, prostate, seminal vesicles, gastro-intestinal tract, and gallbladder. Our methods for locating infections in these organs are somewhat inadequate, especially in regard to the teeth and prostate. The dental x-ray is relied upon to furnish information concerning the roots of teeth. Positive x-ray evidence is satisfying to doctor and patient alike, but a negative x-ray in a dead tooth leaves room for doubt. The study of Austin and Cook, of the Mayo Clinic, as quoted by Bumpus¹², reveals some very convincing information. Of 100 cultures made from nonvital teeth showing negative x-ray, the streptococcus viridans was recovered in 84 per cent. In the group with positive x-ray findings, the cultures yielded streptococcus viridans in 94 per cent. In such a study the presence of an infection at the root of nonvital teeth in 84 per cent of the cases in which the x-ray is negative indicates that our methods of diagnosis are not as yet sufficiently advanced as to reveal the true status of a dead tooth. It seems radical to advise the removal of all nonvital teeth, but there appears to be no alternative for the arthritic.

The prostate gland and the seminal vesicles are common sites of infection which are not properly appreciated as such. A diagnosis

cannot be made on a single negative microscopic examination of the expressed secretion, repeated examinations being necessary to determine the absence of infection. Further, an occasional message is insufficient to remove the infection. It will require several months. It goes without saying that all foci of infection, regardless of location should be removed. Cecil¹³ states that after arthritis has been in existence as long as three years, the removal of foci of infections does not alter the course of the disease, but when foci are removed early and promptly, nature will often heal the infected joint, particularly in the atrophic type.

The value of vaccine therapy in arthritis is questioned by some, but the majority believe that it has a definite place in the treatment of this disease, even though many phases are still in the experimental stage. It has been recently stated that vaccine therapy is not indicated in hypertrophic arthritis: however, I feel that it should be used until more convincing data is produced.

Doubtless Crowe¹⁴ has done much to maintain interest in the vaccine treatment of arthritis. He employs a mixed vaccine combined with autogenous vaccines.

Previously, several million organisms were given to the point of producing chills, fever and activation of joint symptoms. This procedure is now considered harmful. The most recent concept is the use of extremely small doses, one thousand to several hundred thousand organisms, as such small doses will not, as a rule, produce systemic reactions and are sufficiently mild to desensitize and stimulate pathologic cells to the point of recovery. If, at any time during the course of treatment, a reaction is encountered, the number of organisms is reduced; it may be necessary to repeat a given dose many times before it can be increased. An exact routine scale cannot be adopted, as in each case the dose is determined by the patient's reaction. Large doses intravenously are being used with fair results though more or less temporary.

It has been my practice to use autogenous vaccines, preferably streptococcic. If this is impossible, I do not hesitate to use stock vaccines or Coley's mixed toxins, often classed as foreign protein, which contain streptococcus. The exact makeup of this product is not known; however, one-sixteenth of a minim is the average initial dose, diluted in 1 c.c. of water, given intramuscularly every seven days. Vaccine therapy in general should be continued over a long period of time, frequently as long as two years, with periods of rest.

Rest is always important in the treatment

of all types of arthritis, especially early in the disease. By rest the joint is relieved of trauma, and thus healing is allowed to proceed normally.

Physiotherapy is one of the outstanding means for restoring pathologic joints to normal. Rich¹⁵ says that failure rather than marked success has been the outcome of all too well-meaning courses of treatment, and that in the treatment of arthritis the medical profession can lay no measure of its inadequacy upon the trained therapist. Our efforts should be directed, of course, to the prevention of joint deformities, and much can be done if our patients are properly handled. It is perfectly natural for an arthritic to limit the movement of his joints in accordance with the pain. A joint may become fixed if left quiescent for even a short time. The pain is due primarily to nerve irritation in the periarticular tissue rather than to any great disturbance within the joint cavity, therefore, early in arthritis we should resort to the free use of analgesics, thus encouraging motion and keeping the muscles and tendons in working order. The unfortunate complications of ankylosis and contractures are best handled by those familiar with the field of medicine. The use of hot baths, such as ordinary immersion baths, serves to prevent these complications by relaxing muscle spasm, relieving pain, and increasing the circulation about the joint where the arterioles are constricted. Each bath should be followed by a gentle massage of the diseased joints and of the entire body if possible. Massage relieves pain, limbers up stiff joints, and prevents muscular atrophy.

A bath at 107 degrees F. is comfortably hot; however, after the patient becomes temporarily accustomed to this degree of heat, it may be increased. Such baths are prescribed twice a week. It is possible for heat to activate the joint symptoms, and in such cases the degree of heat and frequency of administration must be decreased. Lautman¹⁶ is of the opinion that hydrotherapy is the most effective single agency in the treatment of arthritis.

Dry heat is governed by the same principles as moist heat. It may be used in the form of hot water bags, electric light cabinets, and electric resistance coils. Artificial hyperpyrexia has been used with fair results. Walter Bauer, of the Massachusetts General Hospital, in a personal communication says that it is beneficial in about 20 per cent of the cases, but generally disappointing in that the improvement is not lasting. In view of the arteriole constriction about the arthritic joint, it occurs to me that hyperpyrexia or

protein therapy given at intervals combined with the usual vaccine therapy is a suggestion worthy of consideration.

The effect of heat upon the body is noted in the increased elimination of carbon dioxide, nitrogenous substances, salt and water, and the increase in body metabolism, and, most important, the increase in the circulation. Therefore, the loss of these acid substances, chiefly carbon dioxide, is to leave a relative excess of alkali in the blood and probably in the tissues.

Our ideas concerning what a patient with well-developed arthritis should eat has about-faced from a low protein diet to a moderately low carbohydrate diet. This is based upon the fact that clinical improvement is noted in a low carbohydrate diet. (Pemberton¹⁷), and that arthritics consume more carbohydrates than needed as shown by history (White¹⁸), and the fact that the stools show evidence of carbohydrate indigestion (Os-good¹⁹).

Archer²⁰, in reporting a series of cases with reference to sugar tolerance in arthritis, failed to find any disturbance in sugar metabolism. It is the aim of all that the arthritic diet should be well-balanced in the essentials of nutrition and that the carbohydrates should be kept moderately low, which is not to be confused with absolute low carbohydrate intake. A diet high in fats and low in carbohydrates has the ability to produce arteriosclerosis, therefore we should not lose sight of the fact that the arterioles about the arthritic joint are constricted²¹. Much has been said about vitamin B in arthritis, but as yet nothing definite is known. Some clinics are using vitamins A, B, C and sometimes D²². According to Copp²³ and others, there is a disturbance of calcium metabolism in hypertrophic and atrophic arthritis, but from the dietary point of view little has been done. Since the calcium is increased in hypertrophic arthritis, it is advisable that the diet be low in calcium for this particular type.

Another phase of the gastro-intestinal tract is elimination. Any method that produces daily elimination is satisfactory. After much experience with barium enemas, I believe that an enema properly given is just as valuable as colon irrigation; certainly, water injected into the rectum will travel to the cecum without difficulty, and, if two or three quarts of water are used along with massage the colon can be thoroughly emptied.

Of importance from the patient's point of view is the question of drugs. My experience has been with those that are classed as anal-

gesics. Such drugs should be employed freely.

In conclusion, let me emphasize that arthritis is a chronic systemic disease with relapses and remissions. Parallel ideas about this disease probably cannot be found in any two men. However, the management that has been suggested is most commonly considered the treatment of choice. It is not a one-man job, but embraces several branches of medicine. Our best results will be accomplished by strict attention to predisposing factors, particularly constitutional make-up and trauma; the early removal of foci of infection; the use of vaccine; the institution of physical and mental rest; and the employment of physiotherapy, diet, and colon hygiene. No single method is sufficient within itself, and no combination of methods applies to all cases. Perseverance on the part of the physician and the cooperation of the patient in these procedures will assure the arthritic of a better day.

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Discussion on Paper By Dr. Guy J. Dillard

DR. G. S. MURRAY, Columbus: Arthritis is always interesting. It is interesting because of its inherent scientific difficulty, and because, as Doctor Dillard stressed, of its economic importance. Therefore the presentation and discussion of such an interesting paper as Doctor Dillard's with its subsequent discussions, should be of value to us all, and it should certainly, for the majority of us, do one of two things. It should either eradicate an unwarranted pessimism that makes you feel like jumping out of a window when an arthritic patient walks into your office, that makes you deny him a decent examination, that makes you give him a placebo and hope you will never see him again. Others may be cured of an unwarranted optimism, which also denies him a decent examination, which makes you tell him to have his tonsils out, cut down on his diet, and you will give him some "shots" if he doesn't get along all right.

The treatment and management of chronic arthritis is not as hopeless as the pessimist thinks, and it is not as easy as the optimist thinks. It will need all of your skill and knowledge and perseverance. It will need absolute absence of casualness in the treatment of it, and 100 per cent co-operation on the part of the patient.

You must never say that the fight has been lost, and you can never say that it has been won. If the doctor himself happens to be an arthritic, it is of great benefit. He will understand the patient's point of view, and he will understand some of the patient's difficulties.

To realize what a complicated subject rheumatism is, let me quote from the American Committee for the Control of Rheumatism: "No single infectious agent or defined dietary insufficiency or metabolic disturbance has been conclusively shown to be the sole cause of these disorders. Any one of these and other factors or combinations of factors under appropriate circumstances may basically underlie the onset of arthritis."

That shows the difficulty of the problem of the etiology of this disease, and it therefore follows that the problem of treatment is equally difficult. It is a scientific jigsaw puzzle, and the experts and research workers have got to solve it. The ordinary man in the street cannot even be a kibitzer.

One of our difficulties in reading up on the subject is the variety of classification and the lack of uniformity in terminology. Some of the classifications are very complicated, and I envy the powers of the man who says he diagnoses and differentiates in his treatment these types of rheumatism.

I wish to quote from Dr. James Craig Small: "For the most part, patients may be easily separated into the two groups, but frequently cases are encountered which present characters of both. This latter circumstance emphasizes the importance of bearing in mind that these are types of the same disease, and should ever make one wary of theorizing that

the basic causative factors differ widely as has frequently been suggested. Further evidence in this regard is to be found in the clinical experience of those who have used extensively a standard form of vaccine treatment and have been unable to distinguish important differences in the reactions or responses of patients with atrophic and hypertrophic arthritis."

Warren Crowe says, "From the point of view of treatment, the diagnosis is not of very great importance."

The chief point in the treatment that I would like to stress is the need for thoroughness and patience on the part of the doctor; the need of remembering the many possible factors in the etiology, of remembering that in different patients you will find the symptoms presented in different ways, of remembering that patients will react differently to the same treatment and of remembering that there are available many methods of attacking the disease and that all of them must be used before you give up the case as hopeless.

DR. THEODORE TOEPEL, Atlanta: I think the paper by Doctor Dillard is very timely and it covers the ground well. He has given us some history but did not go back far enough. It is the disease of which we probably have the oldest historical record, and was, as expressed by one writer, "the disease par excellence of the ancient Egyptians." Indeed, the arthropathies, noted in connection with the human remains of the stone age, so widely distributed at the various "stations" throughout France and Spain, indicate pretty clearly that it must have been a source of suffering among human beings of that period.

There is one thing of importance Doctor Dillard did not mention, namely, circulation and disturbance of the normal physiology of the tissues concerned. In general there tends to be a slight lowering of the basal metabolic rate in arthritics. This is apparently due to interference of the blood flow to certain structures, probably chiefly to the muscles. From my observation on patients I come to the conclusion that the tissues are subjected to a certain degree of anemia from a closure of the finer vessels in the capillary system. Every practitioner may make direct observations of the capillaries at the root of the finger and toe nails. Such cases show decidedly less blood in the field affected, slower blood flow, less regular blood flow, and a narrowing and shutting down of many capillaries. Many measures which cause at least temporary benefit to the arthritic, such as heat, massage, coffee, aspirin, exercise, will cause this picture to change and then reveal a restoration to normal circulation.

Doctor Dillard has covered the subject of management with treatment very well. Each arthritic case is a case with an etiology, pathology and treatment entirely its own. What may have been useful in a preceding case may fail entirely in a new case. The general practitioner has often an indefinite idea of the systemic nature of the pathologic deviation of his unwelcome arthritic case, and after elimination of

diseased tonsils and abscessed teeth, he is glad to receive the promise of success carefully worded by some commercial firm. He may thus be easily led to overlook measures of real value, such as rest, physiotherapy, postural exercises, diet, colonic irrigation, tonic medication with arsenic and the like.

As Doctor Dillard mentioned massage, allow me in conclusion to state some of the benefits derived from massage, also some of its dangers by its wrong application. Its influence is chiefly upon the circulation, though it also exercises a local effect upon metabolism, which by repetition, may become cumulative and express itself systemically. The net result is to remove products unfavorable to local function. The arthritic joint should never be included in general massage, as much damage is done by manipulating when inflamed. Rest may be the treatment par excellence in preference to massage in acute arthritic conditions.

DR. HAL M. DAVISON, Atlanta: Doctor Dillard has given us a very complete paper. I should like to stress the remark made about the teeth. By far the majority of the teeth we x-ray, especially the non-vital teeth that have been filled prior to the last few years, contain an improper filling, with a contraction of the filling one-third up the root canal. Dentists say that practically every one of these teeth is infected, but you cannot make them remove them. So the physician has to prescribe the removal of those teeth and take the responsibility for it himself.

I wish Doctor Dillard would tell us what he considers evidence of an infected prostate. Practically 100 per cent of the prostates that we massage will show secretion that contains numerous white blood cells. We do not find organisms in the secretion every time, but sometimes we do.

I want to mention one statement Doctor Dillard made, that I disagree with;—that is, that any way to empty the gastro-intestinal tract is all right. I want to take issue on that. We consider five principles necessary in caring for the intestinal canal, and these mean a lot of work in educating the patient. It is easier to take a pill, and the average physician is careless about it. First is proper diet. Second is habit time. Third is some form of exercise. If the patient be arthritic and cannot take exercise, he or someone else may massage his abdomen and give exercise in that manner. Fourth, absolute absence of laxatives or cathartics. And fifth, the use of mineral or similar oils, colon irrigations, psyllium seed, as may be necessary to empty the bowels without irritation.

There are on the market now three forms of machines for producing hyperpyrexia. The first is a diathermy machine, the next is a short-wave radio, and the third is a cabinet type which has been invented by a man named Clark. We have purchased one of the cabinet machines, and are using it in the treatment of arthritis. So far our results have been very good. We believe that this type of hyperpyrexia is better, perhaps, than that used by protein shock, because you are detoxifying the patient instead of

throwing more poison into the system; you can accurately control the fever, carry it to the point you want it, keep it where you want it, and by a shower bath or alcohol rub reduce the temperature to normal within fifteen or twenty minutes. This cabinet type of machine is also without any danger to the patient. There is no contact with electricity. The patient lies in heated air supersaturated with water vapor. The cabinet is big enough to be comfortable in it. We are satisfied with the results in these cases that have had everything else done without relief. The first thing is usually the relief of pain, in the first three or four treatments, then an increase of pain, and then relief.

Dr. W. P. Jordan, Columbus: The classifications that Doctor Dillard and Doctor Murray mentioned is very trying to keep in mind, but there are two that strike me as being favorable, and the one I am going to discuss is the prostatic phase. It does not make any difference which one of the two you are talking of, or what type of arthritis you are speaking of. There is focal infection.

I think I can answer Doctor Davison's question, and Doctor Dillard can amplify it. The types of bacteria in the prostate are, first, gonococcus, but you find the staphylococcus and the streptococcus at the time of examination. The examination of the prostate includes massage. The best way is for you to read Pelouze's book on "Treatment of Gonorrhea in the Male," and you can find more from that than I can possibly tell you, and you can only do it by your own example in practice. An examination of the prostate for source of infection is a most careful procedure. The average medical man is not willing to examine a prostate unless he is in that line of work. They have an idea that the patient doesn't like it, and they don't like it. Patients come to me from people who have never examined their prostate. Doctor Dillard tells me that patients come to him who haven't been examined, and have been treated for months by various people. The meatus and urethra should be thoroughly cleansed, and the prostate should be massaged thoroughly and properly, so that the patient feels no pain. For a patient to faint is criminal. Those of you who have never had your prostates examined, should, and you will know what pain is.

To answer Doctor Davison's question, I think this is a generally accepted plan: from seven to ten cells on a low-power stained slide is considered fairly normal. If you find up to fifteen or twenty that may be abnormal. But one examination of the prostate is not sufficient. There are various and sundry things that will cause an increased number of white blood cells that do not carry focus of infection, but if they go on too long there will be an infection.

The treatment requires, at times, months, and sometimes years. The massage of the prostate, as Doctor Toepel said, should have an intermission at times. It should be intermittent, or you will get into serious trouble. Improper treatment will delay the

recovery for a long time. If you massage too vigorously you will find that is true.

One piece of advice: If you have anything to do with the prostate, don't tell the patient how long it is going to take. You don't know.

DR. L. MINOR BLACKFORD, Atlanta: The arthritic, like the poor, we have always with us, so Doctor Dillard's paper is very timely. Note that he goes after the patient from every angle. You must remember that you have a patient as well as a disease, and you have to treat him that way.

I was impressed with his sanity on the subject of diet. Three years ago a wealthy lady came to me with a pain in the big toe. She had been at a famous eastern clinic for some months a year or two before, and got a diet for her arthritis. I referred her to a distinguished orthopedist, who gave her a diet diametrically opposed to the first one.

I think Doctor Dillard's advice on diet represents the best opinion at this time, namely, a well-balanced diet, but one rather low in carbohydrates.

There is one other thing which is brand new, still more or less experimental, and that is hyperemia induced by x-ray. It is reported to give satisfactory results in about half the cases that have resisted other modes of therapy.

DR. STEWART R. ROBERTS, Atlanta: I should like to say a few conservative words on this very fine paper.

Some time ago I had a long conversation with Doctor Cecil, the editor of the textbook on the practice of medicine under his name. For many years in New York City he has specialized on arthritis, and has seen cases of arthritis from all over the civilized world, particularly in the East. He said, "We have wasted our time very largely on a classification, and have been entirely too optimistic about arthritis." He had seen some of his friends have vast rooms full of machines, and reached the conclusion that from these machines there was no permanent benefit. Doctor Davison thinks he has a machine from which there is good and permanent benefit. I do not know. I do know that there are many cases of arthritis which no doctor who has ever yet been born on the surface of the earth can either help or cure. I do know that as to teeth we have swung the pendulum of radicalism. I have seen individuals complain of pains in the joints, and a physician have every tooth taken out in one sitting, and they died in two months from ulcerative tuberculosis. I would plead for conservatism. We do not know, in any one patient, that the treatment of a tooth, the extraction of a tooth, or the refilling of a tooth will help the patient with arthritis or cure him.

I have seen an old lady, who suffered with arthritis for thirty-two years, which seemed to be an infectious arthritis, suddenly get well and become immune, save for the insidious damages done in the joint, and have a second attack at seventy-three. We

removed the tonsils, and knew of nothing else to do, and in six months she was well. Did the tonsillectomy help in this case? I think the operation should have been done.

We know thousands of facts about arthritis, but blessed be the man who knows what any one of those facts means. Dr. Sydney Miller, in Baltimore, had a case that was machined, dentalized, extracted, tonsillectomized, and everything else was done, and the patient grew steadily worse. In his honesty, he turned to the young man and said, "I know of nothing else to do for you."

He said, "Doctor, I have a friend on the coast guard in Miami. I think I will go down there."

The doctor said, "I would go."

The boy went down there, got into a bathing suit, played on the surf and the sand, and got well.

I have sent three patients to the Gulf, the western Florida coast, and I think that has done more for them than all the dentists and all the otolaryngologists and all the baking and the machines I have ever seen, with due respect to my dear friends who have discussed this paper.

DR. GUY J. DILLARD, Columbus: The diagnosis of prostatic infection is determined by the presence of pus and organisms in the expressed secretion. One who examines prostatic secretion routinely will not find the diagnosis difficult.

Laxatives in cases of chronic arthritis may be used if diet does not produce proper evacuation, or if colon irrigation is impractical.

I wish to create a feeling of optimism in the management of chronic arthritis. Optimism will lighten the economic problem involved in this disease.

Attention is called particularly to the early removal of foci of infection. Late in the disease the removal of infections will not, as a rule, alter the course of the disease, however, infections should always be removed. A plea for conservatism in this respect, to my mind, is radical conservatism. In addition to the removal of foci of infection, the correction of body mechanics and poor hygiene, the use of vaccines, physiotherapy and rest, combined with perseverance and co-operation will produce gratifying results.

REMOVAL OF RIGHT CEREBRAL HEMI-SPHERE FOR INFILTRATING GLIOMA

W. James Gardner, Cleveland (*Journal A. M. A.*, Sept. 9, 1933), states that, of the three cases in which he has removed the right cerebral hemisphere, the last two patients died within thirty-six hours of hyperthermia, and the first is alive and well twenty-one months after operation. From these results, it appears that this operation entails a grave risk but, if the tumor is completely removed, an indefinite continuance of life is possible. As the speech areas of the brain are in the opposite hemisphere in right-handed persons, no demonstrable speech or intellectual impairment follows the operation.

PREVENTION OF DEAFNESS*

J. ALLEN SMITH, M.D.

Macon

In discussing this subject it will be seen that preventive measures fall roughly into two classes. First are measures directed toward eliminating the known underlying causes of deafness and second are the diagnostic and therapeutic measures for detecting and curing the malady at a time when cure is still possible or for preventing its otherwise inevitable progress. Under the first head I will include and consider briefly such underlying causes as the acute infectious diseases, hypertrophied and infected tonsils and adenoids; all infections of the upper respiratory tract; certain abnormalities of the nasal passages; suppurations of the middle ear (which should be given proper surgical treatment) and the marriage of persons having a family history of deaf-mutism or otosclerosis.

Of the acute infectious diseases, meningitis is the commonest cause of acquired deafness, with measles second and scarlet fever and influenza next. It therefore behooves the pediatrician and aurist to watch carefully and treat all ear complications of the acute exanthemata and infections of the upper respiratory tract and to keep them under observation until they are reasonably sure that normal hearing has been reestablished. To accomplish this, the ears of children suffering from such acute infections should be frequently examined and appropriate treatment during the acute stages given to the nose and naso-pharynx. Hypertrophied and infected tonsils and adenoids are among the most fruitful sources of tubal and middle ear disease and it is now clearly demonstrated and accepted that their proper surgical removal lessens the incidence of progressive deafness in a large number of cases. There is little doubt that many, if not most cases of progressive deafness that become manifest in adult life, have their inception in neglected eustachian tube and middle ear inflammation in infancy and childhood.

Frequently, we see in a patient who has had the tonsils and adenoids removed, the hearing becoming more impaired and for the first time discover evidence of nasal accessory sinus disease. The sinuses in this case show a marked involvement of the ethmoids and antrums and the mother remembers that the child has had slight colds intermittently,

*Read before the Sixth District Medical Society, Macon, December 7, 1932.

especially during the winter months. Fowler states that 86 per cent of children with diseases of the ears have sinus trouble. He further believes that it will be found especially in children, that coincident with the return of hearing is a clearing of the sinus exudates and with every return or exacerbation of the ear disease with its accompanying lowering of the hearing. The prevention of these colds usually means the prevention of the loss of hearing at the time as well as in later life.

Suppurations of the middle ear should be given proper surgical treatment. Contrary to a rather prevalent belief, early and proper incision of an ear drum in an acute otitis media does no harm and should cause no impairment of hearing. On the other hand, ears that are allowed to rupture spontaneously tend to become chronic and invite mastoid involvement. If an ear continues to discharge we should eliminate any trouble in the nasopharynx or nasal accessory sinuses. The presence of adenoid vegetation in the naso-pharynx may cause continual reinfection of the tympanic cavity through the tube. Likewise, the presence of infection in any of the nasal accessory sinuses will tend to prolong a middle ear infection. If after eliminating these factors and under proper treatment the discharge does not clear up, we are frequently dealing with a mastoid infection for which only surgical intervention will suffice. These cases should be watched carefully with repeated functional hearing check ups as in most cases we may expect a decrease in hearing acuity in proportion to the length of discharge.

Finally, regarding the deafness associated with deaf-mutism and otosclerosis, the following may be said: The conditions are definitely of an hereditary nature and Shambaugh² has recently stated that the important step in the prevention of congenital deafness is to discourage consanguinity, as well as the bearing of children, by those with a family history of congenital deafness. Likewise, the practical proposal for the prevention of otosclerosis is to discourage propagation by those with a family history of that disease. Otosclerosis cannot be prevented or cured by any known treatment and Shambaugh² warned emphatically against the many quack treatments so much in vogue.

The enlistment of various agencies to aid in eliminating the underlying causes of deafness is highly essential, as the problem is enormous and even partial solution will require long continued effort. Research is essential, as in every field of medicine. I would rather this word be limited to clinical research

so as to apply to each one in our specialty. The checking of impaired hearing when detected depends on thorough study of the individual case, a careful history and elimination of every possible causative factor. Then education, including that of the medical profession, public health authorities, school authorities, and the laity is essential. We all are aware and deeply grateful for the progress in preventive medicine. As I see it, deafness must be approached in a similar manner. Coates³ in a paper on the prevention of deafness estimates that there are about 3,000,000 deaf school children. Wide cooperation between otologists and public health authorities is necessary. Great progress has already been made in the control of deafness, due to exanthemas, but there are other fields which require intensive study and cooperation between various bodies. Shambaugh⁴ contributed a paper bearing on the same subject. He finds that of the patients with acquired deafness, an enormous majority had become deaf by the fifth year. On this account it is necessary to concentrate attention on children of preschool age.

The detection of incipient losses of hearing as early as possible is of the utmost importance. Without any question, the hearing of every school child should be tested once a year. A thorough otologic examination should be made if any deafness is detected. In my opinion, a complete otologic examination should be made of every child who has a parent whose hearing is affected or who has had ear disease.

At present the Medical Inspection Bureau of the New York State Department of Education is urging the general use of the phonaudiometer for testing the hearing of all school children. Recently tests were made in several cities of that state and 18,198 children were tested; 6.4 per cent gave evidence of defective hearing; 59 per cent of these deaf children were found to be backward in school, being one or more grades behind the average.

In closing, I must again reiterate that with the present preventive system of medicine as a glowing beacon I feel we are headed in a sane channel towards the partial solution of this problem and with the enlistment of these various agencies mentioned the outlook is encouraging.

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THE DIAGNOSIS AND TREATMENT OF BRONCHIECTASIS WITH IODIZED OIL*

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Bronchiectasis is characterized by a weakening of the bronchial walls, which permits localized dilatation and saculation. Three types of this condition are described: (1) Sacular or spherical, (2) Tubular or cylindrical, (3) Isolated cavity formation. These dilatations and saculations may occur in any portion of the lungs, but are most frequent in the lower lobes.

The cause of bronchiectasis is obscure in many cases. Usually it is due to one of the following four causes: (1) pressure from within due to cough or accumulation of excessive secretion; (2) chronic inflammation of the lungs; (3) congenital anomaly; (4) focal infection in teeth, nose or nasal accessory sinuses, particularly the maxillary sinus. Quim and Mayes in *Archives of Otolaryngology*, August, 1929, showed 57.9 per cent of thirty-eight cases of bronchiectasis to have sinusitis. 90 per cent of these were maxillary sinusitis. It appears that one of the first three etiological factors produces the dilatation and the focal infection in the upper respiratory tract causes the infection or whatever it is that causes the symptoms.

The symptoms and signs of this condition may be very numerous. They are: (1) cough, mostly early morning or on change of position; (2) variable amounts of sputum that is more or less characteristic. (When allowed to stand in a conical glass it separates into three layers, (a) thick granular layer, (b) thin mucoid and (c) brownish froth on top.) (3) dyspnea; (4) hemorrhage occurs quite frequently; (5) clubbing of fingers; (6) arthritis occurs in many cases; (7) asthma is frequently associated with this condition; (8) there may be no findings or a variety of rales found in the chest examination; (9) leucocytosis.

A tentative diagnosis of bronchiectasis should be made in every case of chronic bronchitis until it is proven otherwise. The chronic paroxysmal deep bronchial cough in early morning, character of sputum, dyspnea, basal rales, clubbing of fingers, chest pains, microscopic examination of sputum, and x-ray examination with and without iodized oil should eliminate practically everything else. The chief conditions that have to be differentiated by x-ray are tuberculosis, lung

abscess and gangrene of lung. Tuberculosis is most commonly in the apices, while bronchiectasis is usually in the bases of the lungs. These two can usually be differentiated. From abscess of the lung and gangrene of the lung it is sometimes very difficult to differentiate. A single abscess is usually easy, while with multiple abscesses it may be impossible to differentiate the two conditions. The clinical symptoms of gangrene are of great value in making a differential diagnosis. The iodized oil shows up practically a normal lung in gangrene, while in bronchiectasis the characteristic saculation or dilatation shows up. Some authorities state that in 60 per cent of all cases a diagnosis of bronchiectasis can be made from plain films. In the majority of the remaining cases such an examination will reveal findings of a nature to indicate the probable presence of bronchiectasis or the desirability of further investigation with bronchography. Diagnostic bronchography with iodized oil is absolutely essential for obtaining accurate information relative to the nature, location and extent of bronchiectatic dilatations.

The treatment of bronchiectasis has always been more or less unsatisfactory until recently. While iodized oil was being used for diagnosis it was found that those cases with bronchiectasis were greatly improved following an instillation of the oil. The cough was improved, the amount of expectoration was greatly diminished and the general condition of the patient improved. Oschner of New Orleans, states that many cases of asthma with bronchiectasis are completely relieved of asthma for a long time after one instillation of iodized oil. As a therapeutic measure iodized oil should be instilled into the bronchial tree at one to two weeks intervals until expectoration stops or at least is greatly diminished and then at intervals as necessary to control the symptoms.

The contra-indications of iodized oil in the diagnosis or treatment of bronchial affections are: acute respiratory affections, acute or active tuberculosis, very extensive or advanced pulmonary suppuration, advanced circulatory complications and recent hemoptysis.

Indications for the use of iodized oil as a diagnostic or therapeutic agent are: (1) cases of long standing bronchitis with little or no expectoration and indefinite etiology; (2) cases of chronic cough with a previous history of pneumonia or foreign body; (3) cases of chronic cough with purulent expectoration and little or no x-ray abnormality; (4) cases of known bronchiectasis for purpose of mapping out affected bronchial dila-

*Read before the Tri County Medical Society, Edison, March 8, 1933.

tation; (5) asthma where there is suspicion of association with bronchiectasis; (6) all cases of bronchiectasis as a therapeutic measure. There are several methods of introducing iodized oil into the bronchial tree. They are: (a) supra-glottic; (b) bronchoscopic, and (c) inter-cricothyroid. The supra-glottic route is by far the simplest and most widely used and is the method I will describe. The patient sits in an upright position facing the operator. The pharynx is thoroughly anesthetized with 5-10 per cent cocaine by means of a swab. The tongue is grasped with a piece of gauze in the left hand and pulled forward. 1-2 cc. of 1 per cent novocain is injected through a large caliber cannula just back of the tongue. This flows into the trachea. The warmed iodized oil is then injected through the cannula and allowed to run into the larynx and trachea and into the bronchial tree. The patient is instructed not to swallow and to breathe slightly deeper than usual and to try not to cough. About 20 cc. of the oil is the usual amount injected at one time. The patient may be tilted to one side or the other to make it flow into the desired side. The patient should be examined under the fluoroscope immediately after this is done. Then x-ray films may be made for further study. Oschner, of New Orleans, merely has the patient attempt to swallow the iodized oil after the swallowing reflex has been abolished with cocaine. The other treatment consists of general hygiene treatment. The focal infection should be removed. Any disease of nose and sinus should be treated.

Case Report No. 1

Mr. L. S., Aged 50 years, complained of being unable to breathe, weakness, cough particularly in early morning, large amounts of expectoration that looked like pus, loss of weight and asthma.

Present Illness: About three or four months ago patient had an attack of influenza and has not gotten entirely well. He had been under the care of another doctor who had told him he had advanced tuberculosis. He has had asthma off and on for about six years and has coughed considerably all along during this time. Has had several attacks of bronchial trouble. He had gotten into such a condition that the physician started him to taking narcotics for rest.

Family History: Father had asthma and was a morphine addict. Occupation: Painter, farmer, carpenter. Has worked at a gin a great deal. History otherwise is unimportant. Examination: Findings: (1) bad teeth and gums, (2) cloudy left maxillary sinus, (3) musical and coarse rales all over chest, principally at bases, (4) evidence of marked expectoration. (5) fluoroscopic and x-ray examination showed evidence of chronic inflammation around

hilus of lungs and in lower lobes, apices apparently clear, (6) sputum negative for tuberculosis on several occasions. (7) Wassermann test negative. My impression was that he had a very severe bronchiectasis. At first I gave him a tonic, foreign protein intramuscularly, symptomatic treatment for asthma, and narcotics only when absolutely necessary. He improved slightly on the treatment. On January 28, 1933, he was given iodized oil into the trachea. X-ray showed the diagnosis to be bronchiectasis. He improved considerably after this treatment. He has been given three other treatments since then and has gained strength and feels much better, cough and expectoration are much better. He continues even now to have some asthma. I have taken him off of morphine and of course that has upset his nervous condition somewhat.

Case No. 2

E. S., a 28 year old colored woman, has had asthma all of her life. X-ray shows evidence of chronic inflammation in bases of lungs. Wassermann negative. She was given one instillation of iodized oil only a few days ago and she states that she feels better than she has felt for a long time.

Summary

(1) The value of iodized oil in the bronchial tree as a diagnostic agent is shown.

(2) The value of iodized oil as a therapeutic agent in bronchiectasis is shown.

(3) The usual method of administration is described.

(4) Two cases are reported.

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PNEUMOCOCCIC INFECTION OF SACRO-ILIAC JOINT COMPLICATING PREGNANCY: TREATED BY RADICAL RESECTION OF ILIUM

Fremont A. Chandler, Chicago. (Journal A. M. A., July 8, 1933), treated two cases of pneumococcic infection of the sacro-iliac joint complicating pregnancy by radical resection of the ilium. One resulted in a complete cure one year after operation; there is satisfactory progress to date in the other case.

RUPTURE OF THE UTERUS DURING LABOR*

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Rupture of the uterus during labor, although a comparatively rare condition, is sufficiently common to be of general interest. Freund, from the collective reports of seventeen authors, found an occurrence of one rupture of the uterus to every 2,114 cases. The statistics examined by him were in the most part taken from hospital records, and since the majority of these patients were admitted to the hospitals, the relative occurrence as here shown was greater than it would have been if the non-hospitalized cases were considered.

Rupture of the uterus occurs more frequently in multipara than primipara in a ratio of eight to one. The danger increases with the number of pregnancies due to structural changes, scars and inflammations, the residue from previous labors which weaken the muscular fibers of the uterine wall. Women with flabby abdominal walls and fat women seem especially predisposed. The incidence is greatest during the fourth decade.

Ruptures of the uterus may be divided into two classes, the spontaneous and the violent. Spontaneous ruptures are those which may occur as the result of the natural forces of labor or more commonly because of a pathologically altered uterine muscle which is rendered asunder by the ordinary process of labor. Violent ruptures are those which result from injury either by the hand or instrument of the operator or from some external force. The two most common causes in this class are the manipulations of the abortionist and the use of pituitary extract. The symptoms of this condition are typical and uniform. During the height of a uterine contraction the patient complains of a sharp, tearing pain in the lower abdomen, and may exclaim that something has torn within her. The symptoms of shock are immediately evident. The lips pale or become cyanotic; cold sweat appears on

the face; the temperature drops; the pulse becomes weak and the respiration sighing. The pains cease and the patient is ominously quiet for a short time. She soon complains of shortness of breath, precordial oppression and a feeling of impending death, but becomes restless again. Hemorrhage appears from the genitals but it is usually not profuse. The fetal movements for the first few seconds after this accident are very violent but the child soon dies.

The clinical findings in cases of rupture of the uterus vary with the stage of labor in which it occurs and whether or not the child is in the uterus or has been extruded into the abdominal cavity when the examination is made. Usually there is found: (1) A collapsed patient in acute shock; (2) Absent or very weak uterine action; (3) External hemorrhage mild or severe, rarely absent; and (4) On abdominal palpation the child is in the uterus or has been extruded lying beneath the abdominal wall, the empty uterus being pushed aside or posteriorly where it is not palpable. If the child has only partly escaped from the uterus a heart-shaped tumor is noticed. Usually the tenderness is so marked that the abdominal examination is unsatisfactory.

The prognosis is grave in all cases. Incomplete ruptures are little less dangerous than complete ones. Coblanck found a mortality of 78 per cent for the mother, with greater mortality for the child. Unless the delivery can be completed at once, the child is surely lost. If the mother survives the hemorrhage and shock, her life depends on the presence or the absence of infection.

If a woman is in a well-equipped maternity hospital when this accident occurs, an attempt should be made to save the child, either by a quick delivery from below or by abdominal section. Extreme shock and collapse may forbid the rapid emptying of the uterus which might result fatally for the mother. It is not advisable to transport a parturient woman to a hospital after rupture, but it may be necessary if the child has escaped into the peritoneal cavity, because the proper treatment is laparotomy which cannot always be done at home. During

*Read before the Thomas County Medical Society, Thomasville, June 16, 1933.

the transportation the abdomen should be supported by a padded binder and steadied by the hands of a medical attendant if the jolting of the ambulance is excessive.

As the case to be reported is one which occurred in a pregnancy subsequent to a Cesarean delivery, and the operation is in such great demand in some sections of the country, I wish to emphasize the importance of considering other methods of delivery before doing a Cesarean section. Of course, we may risk injury by crossing the street, but we must cross the street at times. The same applies to Cesarean section. One must remember that a scar in the uterus, in either the upper or the lower portion, is not innocuous and must be regarded as a factor of unknown strength. Its integrity in subsequent labors cannot be determined by our present methods of diagnosis, and its potentialities to rupture must always be appreciated. This does not imply that "Once a Cesarean, always a Cesarean" is an infallible rule, but it does imply that once a patient has undergone a Cesarean section the most rigorous supervision, preferably in the hospital, should be followed for that patient when approaching term in succeeding pregnancies.

Report of Case

A colored woman, aged 21, had a Cesarean section sixteen months ago because of a tumor obstructing the birth canal. She went into labor and the family physician was called. Although having been duly warned of the dangers of another pregnancy, she attempted to be delivered at home. The labor pains progressed rapidly and within a short while were of one to two minutes duration and very violent. The attending physician attempted to express the growth downward so the fetus could be expelled. Not being successful in this, after eight hours of trying, he gave the woman some hyosine and morphine and sent her in an open car to the hospital, a distance of eighteen miles.

At the time I saw the woman she was in a partial stupor and very anemic. The lower abdomen was markedly distended and nodular in contour. Any attempt to palpate the abdomen would arouse the patient from her stupor and cause violent resistance. There were no uterine contractions. The pulse was rapid and weak and the blood pressure was 85 systolic and 65 diastolic. No fetal heart sounds could be heard. A few blood clots were seen about the genitals. There was a comparatively soft but solid tumor the size of a small grapefruit lying within the vaginal outlet and securely attached in the left fornix.

The cervix was well dilated and the head of the fetus was within the cervical opening.

A Porro hysterectomy was decided upon. On opening the abdomen a full term, dead fetus was found lying with head and shoulders within uterus and its remainder external to the uterus. A large amount of blood was present. A rent, three inches long, was found in the uterine wall, the origin of which was at the lower portion of the old uterine scar. After removing the fetus, the uterus, and the blood, the abdomen was closed, leaving one cigarette drain in place. Intravenous saline and glucose were given. Two days after the operation, 500 cc. of blood was given by direct transfusion. The blood picture showed the hemoglobin to be 29 per cent; the erythrocytes 2,420,000; the leukocytes 14,650 and the polymorphonuclears 78 per cent. The day following the transfusion the hemoglobin was 40 per cent; the erythrocytes 2,790,000; the leukocytes 19,850 with the polymorphonuclear 81 per cent. The Kahn test was negative.

A few days following the delivery, the temperature of the mother gradually increased until it reached 103 degrees. Not being able to find a cause for the elevated temperature, the tumor was examined and was found to be sloughing and obstructing the birth canal. This was treated with local applications. After a few days a portion of the tumor sloughed off and the temperature became normal. The woman recovered and was dismissed from the hospital January 6, 1933. On April 8, 1933, she was in my office and stated that she was doing her usual housework without any discomfort.

The statistics compiled of uterine rupture following Cesarean section vary greatly. D'Acerno, in a recent article, quotes various authors' statistics as varying from 2 to 3 per cent in the low or cervical Cesarean and 25 per cent in the classic Cesarean.

Summary and Conclusions

(1).

Though no general conclusions may be drawn from a single case, nevertheless, it is advantageous to add this one to the ever increasing number in order that more accurate statistics may be added to the record.

(2).

The causes of post-Cesarean rupture of the uterus are wound infection, cicatrix formation, type of operation, the presence of adhesions, and in general any cause interfering with the healing of the scar by primary intention.

(3).

As any type of Cesarean endangers the lives of mother and baby in future pregnan-

cies, it is incumbent on every operator to weigh the indication and limitation, and to allow a complete test of labor, before deciding on Cesarean section.

(4).

Any patient having one Cesarean should not be allowed to go in labor again until the cause for the first Cesarean has been removed.

THE ORAL TREATMENT OF SYPHILIS IN NEGRO CHILDREN WITH ACETARSONE (STOVARSAI)*

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LABORATORY COLLABORATION

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Atlanta

The drug used in the cases to be reported was a preparation which was one of the many used by Ehrlich¹ in bringing forth the use of the arsphenamines. The latter was used primarily either intravenously or intramuscularly in congenital lues. The preparation used by us is known by the general name of acetarsona, and in this country has been commonly known as stovarsal. The chemical formula for stovarsal is acetylaminohydroxyphenylarsonic acid. The advantage of this drug lies primarily in its being able to be used by mouth, although recently the use of it intravenously has been reported. In this report we shall give only the results of the oral method. Stovarsal has a very high arsenic content which is between 27.1 and 27.4 per cent. Whereas the arsenical content of neoarsphenamine is 19 per cent and that of sulpharsphenamine is 21 per cent.

Many authors as early as 1924 reported excellent results with the use of stovarsal in the treatment of congenital syphilis. Among the reports we find those of Soldin and Lesser², Kros³, and Oppenheim⁴. The dose mentioned by various authors varied widely. Tuscherer's⁵ treatment is of 41 days duration. He gives a total of 21 grams. Kiss⁶

administered the medication in milk or tea in the following doses regardless of age. The first week one-fourth of a .25 Gm. stovarsal tablet was given daily, the second week one-fourth of a .25 Gm. stovarsal tablet was given twice daily, and the third week, one-fourth of a .25 Gm. stovarsal tablet was given three times daily. The last dosage he continued for a period of three months. He then allowed a two months period which was followed by injections of neoarsphenamine and bismuth regardless of any change in the Wassermann reaction.

We have followed in our cases the Bratusch-Marrain⁷ method with slight modifications. It is described as follows: The duration of the entire active course is nine weeks. The first period consists of seven days with a dosage of .005 Gm. (one-thirteenth grain) of stovarsal per kilo daily. The second period consists of seven days with the dosage of .010 Gm. (one-seventh grain) per kilo daily. The third period consists of seven days and stovarsal is given as follows: One-fourth of a grain or .015 Gm. per kilo daily. The fourth period consists of seven days with stovarsal given as follows: One-third of a grain or .02 Gm. per kilo daily. The fifth period consists of the 5th, 6th, 7th, 8th, and 9th weeks and the dosage of stovarsal is .02 Gm. (one-third grain) per kilo daily. The sixth period consists of six weeks for rest.

If the Wassermann is positive, no rest period is given and treatment is begun with the usual doses during the first week, to be continued for nine weeks as above. We have used no other drug as some authors recommend, although at present we are attempting to run a series of cases where bismuth is used intramuscularly once a week along with the daily use of stovarsal. There are many untoward effects to be encountered in the use of this medication in congenital syphilis. We refer you especially to the report of Maxwell and Glaser⁸ and Abt and Traisman⁹. In brief it may be stated that the following untoward effects may be encountered: rash, fever, diarrhea, albuminuria, Herxheimer reactions, paralysis, and even death. If at the onset of the first symptoms of toxicity, the use of

*Read before the Medical Association of Georgia, Macon, May 10, 1933.

the drug is discontinued, we believe that serious toxic effects can be avoided and the drug can be used again in a few days after the symptoms disappear. As this drug was used by us in negro children alone we can report only two cases where toxicity occurred. One patient developed transient pyuria and another suffered a scaly eczematous eruption all over the face. The first condition improved rapidly; the other condition remained for a long time although the use of stovarsal was discontinued.

The most common symptoms of congenital syphilis encountered in our patients were as follows:

1. Snuffles.
2. Pseudo-paralysis.
3. Peeling of the skin of the soles of the feet and palms of the hands.
4. Vesicular and papular eruptions all over the body.
5. Syphilitic keratitis.
6. Mucous patches in the mouth and circinate lesions about the face.
7. Condylomata around the rectum.
8. Syphilitic bursitis.
9. Syphilitic purulent rhinitis.
10. Cervical adenitis.

Of these conditions we saw marked improvement in all patients soon after treatment was instituted, except in the cases of interstitial keratitis. Some of the patients with interstitial keratitis improved and others showed no improvement. A few patients became worse, and in one patient the other eye became involved after treatment. The conditions found in very early infancy in congenital syphilis improved rapidly, and especially was this true of the skin lesions and adenitis.

Our blood findings were interesting in that the children in early infancy showed as a rule a low hemoglobin. The red blood count was not materially reduced. Eosinophilia was found in many patients. The hemoglobin improved in nearly all patients 18 months of age. In all of the children the hemoglobin remained constant. There was no noticeable increase in the red blood count. In some patients the eosinophilia showed improvement and in others the opposite was noted.

All cases treated by us showed a positive Wassermann at the beginning of treatment. It is known as a rule that the Wassermann can be easily reversed in very young infants with almost any treatment. In older children this is not true. Our reports show about a 35 per cent reversal of Wassermans after one course of treatment. The Wassermann reactions in older children were not reversed. However, some Wassermann fast patients had a negative test after one to two courses of treatment. We believe that this observation agrees with those of other workers.

A spinal fluid examination was done on every pa-

tient after each course of treatment. A slight increase in the cell count in some of the fluids was noted. The Wassermann tests and globulin examinations of the spinal fluids were negative.

Eighty per cent of the patients had roentgen ray evidence of syphilitic bone lesions. The most common roentgen ray findings were slight and marked periostitis of the tibia and fibula, marked periosteal thickening of the long bones, syphilitic destruction of bone, luetic osteomyelitis and expansion of the diaphyses of the long bones. Abt⁹ demonstrated a complete healing of syphilitic bone lesions in a very short time through the oral use of stovarsal. In our clinic we have been greatly disappointed in the results of treatment. We have had only two patients who showed an improvement in the bone lesions and of those two only one showed a complete healing. This would indicate that syphilitic lesions of the bone in children do not respond rapidly to the treatment by stovarsal alone and soon we hope to report the use of some other drug, probably bismuth, in conjunction with the oral treatment in patients whose Wassermann reaction has not been changed, or where the healing of the bone has not been demonstrated by roentgenograms.

Treatment with stovarsal is primarily of value in causing the disappearance of skin lesions and limiting gland involvement. It has also been noted that roentgenograms of the bones do not show evidence of healing. In pseudo-paralysis, patients are usually able to use their arms and legs a short time after treatment has been instituted but the roentgenograms show little change at the termination of the course of treatment. That visible lesions do disappear through the use of stovarsal may be illustrated by the case reports: A baby, ten weeks of age, showed on examination marked pain on the use of the lower extremities and many circinate lesions on the face. The blood Wassermann was strongly positive. Roentgenograms showed marked periosteal thickening of the long bones. After a few treatments the baby was able to use its legs normally. The circinate lesions on the face began to fade. At the conclusion of the treatment there were no skin lesions visible, and no pain on motion of the legs, but the periosteal lesions remained the same. The spinal fluid Wassermann was negative.

Case 2. A baby four months of age, had peeling of skin on the soles of the feet and palms of the hands, and fine papular eruptions all over the body. The blood Wassermann was strongly positive. The roentgenograms showed marked periostitis of the long bones. The eruption disappeared completely after one course of treatment, but the periostitis remained unchanged and the Wassermann reaction was reported two plus.

Case 3. A child ten years of age, had a marked inflammation of both conjunctivae and marked haziness on both corneas. The Wassermann was strongly positive. A diagnosis of interstitial keratitis was made. After two courses of treatment the blood Wassermann remained strongly positive. One of the eyes improved

but the condition in the other eye became worse. The spinal Wassermann reaction remained negative. These case reports demonstrate the action of stovarsal in the treatment of syphilis in children.

Summary

A group of negro patients were treated for congenital syphilis. These patients had definite serologic, clinical, and roentgenologic signs of this disease. Our treatment was given according to the routine method of Bratusch-Marrain.⁷ Where the patient's Wassermann remained positive no rest was given but the treatment was continued according to the method described. We were very fortunate in having few untoward effects because the toxicity of stovarsal was well known to us. The urine examinations were uniformly negative except in one case of transient pyuria. Our blood findings were probably the same as those reported by other authors. This was especially true of the Wassermann reactions. The hemoglobin did not improve after treatment except in the very young infants. The lesions of the skin and glands improved rapidly but the bone lesions appeared to remain unchanged after treatment with stovarsal. The spinal fluids were uniformly negative. Syphilitic keratitis always requires long treatment so nothing definite could be established by the use of this drug.

Conclusions

We have been favorably impressed with the use of this medication in early congenital syphilis when demonstrable by skin lesions and glandular enlargement. We believe that this treatment should be supplemented by the use of other drugs if better results are to be obtained in cases of syphilitic bone involvement, late secondary and tertiary lesions and in the reversal of Wassermann reactions.

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LABORATORY COLLABORATION BY DRS.
CATHCART AND SMITH

The remarks we have to make are only in reference

to the hemoglobin estimations and the red cell counts as noted in the infants under three years of age. The findings in the older children were not significant and we could not draw any definite conclusions due to the fact that so many of them had other diseases which could influence the blood picture.

The normal infant is born with a high red blood cell count, ranging from 4,500,000 to 6,500,000 per cubic millimeter. The hemoglobin is also high just after birth, but during the first two weeks of life both the red blood count and the hemoglobin drop rather rapidly, the red cell count less rapid than the hemoglobin. The hemoglobin is lowest from the third month to the second year when it gradually increases up to puberty. The red cell count during infancy ranges from 4,000,000 to 5,500,000.

As has been shown, the hemoglobin and the red blood cell count in the younger children reported were low in all cases and according to our findings the hemoglobin improved following treatment, but there was very little change in the red cell counts. The explanation of this finding seems obscure, but the answer may be found in the function of the liver.

The fetal liver in the normal infant, as well as in the luetic infant, functions as a blood forming organ. In the luetic infant, there is usually retardation of this function due to the diffuse interstitial hepatitis which occurs very frequently as observed by Holt, Jeans, McCallum, Cook and others at autopsy in hundreds of luetic infants. These men found that the liver is more frequently involved in congenital syphilis than any other organ. When involved, it shows microscopically a great increase in the connective tissue diffusely scattered throughout and even between the individual liver cells. Isolated areas of blood formation were also noted and indicated a general retardation in the development of this organ. Spirochetes were found in enormous numbers in the livers of these infants.

The iron in the blood stream, absorbed from the intestinal tract, and the hemoglobin derived from the destruction of the red cells in the spleen, are eventually stored in the liver. The fate of these compounds has not been definitely traced but it is clear that they are somehow worked up into hemoglobin in the liver and then taken up by the red cells. These facts may in a measure explain the low hemoglobin estimations as found by us.

With the general improvement following the stovarsal treatment, insofar as the discernible lesions are concerned, it may be analogous to state that the liver shares in this improvement and functions in a more normal manner to dispose of the hemoglobin properly.

The bone lesions as observed in this series of cases were not improved to any great extent and according to McCallum when the bones are involved in syphilis there is almost a complete annihilation of the blood forming tissue in the bone marrow, this tissue being replaced by granulation tissue containing a few myeloid elements. This probably explains the fact that the red cell counts were not affected by treatment.

Discussion on Paper by Doctor Yampolsky

DR. BENJAMIN BASHINSKI, Macon: I am sure all of you enjoyed Doctor Yampolsky's paper. We all remember his good work in syphilis. This is certainly a step forward, a great step forward, because if we have something that we may use by mouth in treating syphilis, we have made a rapid stride. Many of us have had the experience of treating syphilis by injection, and due to the fear of the mother or the fear of the doctor of hurting the baby, we did not get as far as we should. Personally I have not had any experience in the use of stovarsal by mouth, but I certainly will follow in Doctor Yampolsky's footsteps. I am sure that there is no reason why all of us cannot get the same good results. It will mean so much for patients away from us, who hesitate to come to us as often as we would like. We can now treat these cases with more beneficial results.

DR. M. HINES ROBERTS, Atlanta: I feel indebted to Doctor Yampolsky for bringing to our attention this method of treating congenital syphilis. Those of us who confine our work to pediatrics appreciate the technical difficulties encountered when intravenous medication is employed. Should stovarsal, which is administered by mouth, prove equally efficacious in the treatment of congenital syphilis it will mark a tremendous advance in therapy and will be gladly welcomed by both the physician and the patient.

The drug was at first administered orally to adults in about 1921. These observations were made in Germany and seemed to promise considerable success. In 1924 it was used first with children. The results in congenital syphilis were definitely more favorable than were those noted in acquired syphilis. Stovarsal has been used relatively little in this country and only during the past few years.

A study of the literature reveals the fact that the dosage of acetarsone (stovarsal) is still a controversial point which probably accounts for the wide variation in results. It seems to me much work similar to that presented by Doctor Yampolsky must be done before the optimum dosage can be established.

There are certain points on which agreement is general, namely: the drug is more efficient in congenital syphilis; the results are definitely more striking when used in patients under one year of age, the clinical manifestations of the disease are quickly cleared by its administration, but a reversal of the Wasserman reaction is difficult to obtain.

I am glad that Doctor Yampolsky in his conclusion did not unreservedly endorse stovarsal as the ideal treatment of congenital syphilis and abandon other modes of therapy. Although undoubtedly it is effective, I think there is much to be proved before we can discard the intravenous treatment of congenital syphilis.

DR. A. M. JOHNSON, Valdosta: I have had the privilege of using stovarsal in six cases of congenital syphilis, with essentially the same results as Doctor Yampolsky reports in regard to the clearing of the

cutaneous lesions and decrease in size of the spleen and lymph glands. In this group of cases there were no gross bone lesions such as dactylitis or epiphysitis. No doubt bone lesions were present but, in the absence of x-ray studies, from my own experience I can draw no conclusions as to the efficacy of stovarsal in these lesions. I am glad Doctor Yampolsky presented his findings in those cases with bone lesions.

I want to repeat Doctor Yampolsky's warning regarding the dosage of stovarsal. It has been found to be a very dangerous drug. In the hand of some investigators who have reported results using various dosages there have been several sudden deaths and frequent cases of neuritis and pseudoparalysis.

We are handicapped greatly in the treatment of some cases of congenital syphilis, particularly among the lower classes, in that mothers fail to cooperate in what appears to be a cruel procedure. In these cases treatment ceases as soon as the gross lesions are cleared up and before the Wassermann reaction is reversed.

I want to thank Doctor Yampolsky for this excellent report of a drug which has the possibility of eliminating a great deal of our present difficulty in treating congenital syphilis and which in the future may materially reduce our incidence of syphilis.

DR. JOSEPH YAMPOLSKY, Atlanta (closing): My chief purpose in bringing this to the attention of the society is that I believe we should be acquainted with the use of all appropriate drugs in a disease which is so prevalent. Since this medication is used primarily in infancy, I might say that the knowledge is also infantile, because at present different dosages are used in different clinics. I believe the dosages I gave are used commonly in all of the important clinics.

There is no question about the marked reactions following the use of this drug, but we should have knowledge that there is such a drug and that we can get certain results with it. I believe no matter how good a drug we find we should have other drugs to use in conjunction with it. For that reason I hope all of you will have occasion to use stovarsal. Some of you may have no opportunity of taking roentgenograms on these patients. That is the most significant factor that we have found. Thirteen out of sixteen cases presented syphilitic involvement of the bone.

Charles T. Stone, Titus H. Harris and Meyer Bodansky, Galveston, Texas (*Journal A. M. A.*, Aug. 12, 1933), treated two cases of polycythemia vera with daily administration of 0.1 Gm. of acetylphenylhydrazine over periods of seven and four and a half years, respectively. They maintain the view that as a therapeutic agent this compound is superior to phenylhydrazine hydrochloride. As compared with the latter, the acetyl derivative is less toxic, the dosage is more easily regulated, and it provides a greater margin of safety in cases of overdosage or in the event that the cumulative and delayed effects become pronounced.

THE USE OF SALYRGAN IN CARDIAC DECOMPENSATION WITH EDEMA*

Case Report

ROGER W. DICKSON, M.D.

Atlanta

Salyrgan is the sodium salt of a compound produced by the influence of mercury acetate upon salicyl-allyl-amido-acetic acid; it contains about 36 per cent of mercury, and is used in the form of a 10 per cent aqueous solution, of which 1 c.c. contains 0.036 gm. of mercury. It is usually given deeply into the muscle; it can also be given intravenously, but should not be given subcutaneously, because of its irritating action on the tissues. The initial dose is 0.5 to 1 c.c. and this is increased to 2.0 or 2.5 c.c., repeated every 2 to 5 days as indicated.

Because of the relative absence of untoward mercurial reactions from salyrgan (that is, stomatitis, ulcerative colitis, albuminuria and cystitis) it has largely replaced novasurol (merbaphen) as a diuretic. The diuretic action, too, of salyrgan is more prolonged than that of novasurol. Diuresis, following the use of the drug, is most marked during the first twenty-four hours and rapidly falls to normal during the second day. Prolonged diuresis is reported to be more probable with intramuscular than with intravenous administration.

Salyrgan is supposed to be a "tissue diuretic," acting by diminishing the affinity of the tissue colloids for water and sodium chloride. Some observers believe that the action is mainly on the kidneys, either directly or as a part of a general vascular effort. Clinical experience lends support to the latter belief, since an efficient renal function is essential for salyrgan diuresis and the drug is less effective in pure renal edema such as is found in cases of nephrosis. Salyrgan acts better when combined with the administration of acid-producing salts, such as ammonium nitrate, ammonium chloride and calcium chloride.

Acute nephritis or the presence of blood in the urine is a contraindication to the use of salyrgan; albuminuria is not a contraindication to its use. Jackson has shown in his work with dogs that the intravenous injection of salyrgan produces a mild, slow, but persistent rise in blood pressure; repeated doses cause a lesser rise and large doses produce a marked cardiac irregularity, finally with complete fibrillation of the ventricles.

His experiments also showed that the drug produces medullary stimulation with an accelerated and deepened respiration, and (in toxic amounts) central respiratory paralysis.

Through the rather exhaustive literature on salyrgan an occasional unhappy result is found following its administration. Andrews reports a case of double mitral disease and aortic regurgitation in which 0.5 c.c. of salyrgan with 10 c.c. of sterile distilled water was given intravenously; 4 minutes were consumed in giving the injection; before the full dose was given, the patient complained of headache; 15 minutes later he suddenly lost consciousness and the upper limbs and face became involved in a clonic spasm for 30 seconds; the features became blanched and the pulse rapid and almost imperceptible. The clonic spasms were followed by vomiting, repeated several times within an hour. In twelve hours following the injection the patient had five similar seizures, each followed by vomiting. No diuresis was produced. Wolf and Bongiorno report a case of nephrosis in a boy of 4 years, who received six doses of salyrgan intravenously. Each administration was followed by an augmented rise in the afternoon temperature and malaise. The injection preceding the fatal administration was followed by chills, fever, a morbilliform rash, anorexia and malaise. The sixth dose caused sudden death. The authors believe that the death was an anaphylactoid one.

Salyrgan is most useful, of course, in cases of cardiac decompensation with edema, because of its strong diuretic effect, relieving the body of the excess amount of fluids and adding greatly to the comfort and efficiency of the patient.

Such was the case of Jerry, 8 years of age, who was seen on November 28, 1929, because of swelling of the legs. In October, 1927, he was given diphtheria toxin-antitoxin by his physician. Before time for his immunity to develop he was exposed to diphtheria, became hoarse and was given 10,000 units of antitoxin. He had no immediate reaction but did have serum sickness in about two weeks. Then he was described as being normal until February, 1929, when he had influenza, followed by whooping cough, which lasted for four weeks, and he was ill until April, 1929. Since that time he had had fluttering of the heart, dyspnea, cough and swelling of the face, abdomen and feet. For the past two months he had grown very much worse of all his symptoms and recently he had had complete loss of appetite, vomiting, partial anuria and loose stools. He had had measles at three years of age and no history of tonsillitis or rheumatism could be elicited.

Examination of the boy on November 28, 1929,

*Read before the Fulton County Pediatric Society, Atlanta, April 13, 1933.

showed him to be very pale, markedly emaciated and very dyspneic. There was a large amount of edema of the face, feet and legs. Marked dental caries and dental abscesses were present; the tonsils were much enlarged. Examination of the lungs showed numerous moist basal rales; the liver was enlarged and tender and extended down to the level of the umbilicus and there was much free fluid in the abdomen. The heart was markedly enlarged, rapid and irregular and a loud blowing systolic murmur was present over the mitral area and transmitted to the base of the left axilla and to the angle of the left scapula; the second mitral sound was diminished in intensity. No immediate treatment was ordered at this time, other than bed rest, because it was expected that he would be brought to the hospital as soon as the trip could be arranged. He was seen again on December 6, when he was admitted to the Eggleston Hospital. After a train ride of 200 miles he was markedly decompensated, almost pulseless and the subcutaneous edema was increased as was also the abdominal ascites. His weight, upon admission to the hospital, was 53 pounds, 6 ounces.

He was put to bed, given sedatives, restricted fluids, a very light diet and 3 grains of powdered digitalis daily. For the first twenty-four hours in the hospital his urinary output was $4\frac{1}{2}$ ounces (140 c.c.) On the second day he was given 0.5 c.c. of salyrgan intramuscularly and for the following 24 hours his urinary output was 81 ounces (2430 c.c.), while for the next 24-hour period it was 75 ounces (2250 c.c.) his weight was 47 pounds, 13 ounces, a loss in two days of 5 pounds, 9 ounces, and the digitalis was decreased to 2 grains daily. From this time onward the urinary output remained from normal to above normal, the edema, of course, became much less from day to day, digitalis was continued in the dosage of 1 to 2 grains daily and it was not necessary to repeat the dose of salyrgan. At the end of a week his weight was 41 pounds, 1 ounce, a total loss during the week of 12 pounds, 5 ounces, representing, of course, a loss in abnormal body fluid. From this time onward his weight gradually increased to normal, not from an increase in fluids, but from an increase in normal body fat. On the fifteenth day in the hospital he was given a gas anesthetic and two abscessed teeth were removed and on the twenty-fourth hospital day, under gas and ether, the tonsils and another abscessed tooth were removed. From both of these procedures he recovered rapidly and his compensation was not impaired. On January 24, 1930, he was allowed to go to his home in south Georgia and at this time there was no enlargement of the heart or liver; compensation was perfectly established, with, of course, the evidence of the valvular lesion still present.

The Medical Association of Georgia will hold its next annual session at Augusta, May 8, 9, 10, 11, 1934.

ADVERTISING AND THE NEW FOOD AND DRUGS BILL

Assistant Secretary of Agriculture, Hon. R. G. Tugwell, Washington, states that, "Reputable publishers and broadcasters do not want to disseminate fraudulent or misleading advertising. They realize in the long run their interests are identical to the interests of consumers.

"In the field of foods, drugs, and cosmetics, unfortunately, broadcasters and publishers do not have facilities for determining accurately whether or not a product is truthfully represented in advertising copy. True, some publishing firms have formed their own reviewing committees, and others submit medical advertising to competent advisers for comment. But on the whole the public can hardly expect every newspaper and radio station in the United States to maintain costly laboratories for testing advertised products; new patent medicines, for example, come and go with astonishing rapidity and there are now literally thousands of them on the market. No matter how well intentioned publishers may be, therefore, there is placed before the public a great deal of advertising that deceives consumers, much to the detriment of public health.

"While national magazines, good metropolitan dailies and radio networks carry many fraudulent and misleading advertisements, by far the most flagrant abuses are found in movie magazines, mail-order catalogues, educational and religious journals, cheap fiction or 'pulp' magazines, small dailies, country weeklies, and on small independent stations, as well as in direct mail advertising. This is probably a matter of competition. Just why a 'pulp' magazine should declare that a depilatory is SAFE to use when it is known that the depilatory contains a positively dangerous ingredient that sends users to the hospitals, causes all hair to drop from the body, and sometimes leads to death, I do not know, unless it is that the better advertising accounts have exhausted their funds before they reach this class of publication and it must, perforce, take what it can get. Apparently educational and religious journals find themselves in the same predicament. Many small town newspapers salve their consciences for advertising perfectly worthless and often dangerous products by charging a higher advertising rate for this type of copy.

"Publishers as well as advertisers themselves, are making some effort to improve the situation. There was recently organized in New York City the Advertising Review Committee, consisting of representatives of national advertisers, advertising agencies, publishers and broadcasters, to review cases considered as violating sound advertising practices. This committee went on record as being in full sympathy, in principle, with remedial legislation now being considered by congress and backed by the President and the United States Department of Agriculture. The committee recommends the revision of the Food and Drugs Act which will prevent false and misleading advertising in food and drugs."

THE JOURNAL

OF THE

MEDICAL ASSOCIATION OF GEORGIA

Devoted to Welfare of Medical Association of Georgia

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SEPTEMBER, 1933

BURNS

Of all persons sick and unable to work in the various industries from 0.5 per cent to 0.9 per cent are incapacitated on account of burns. The mortality rate of burns and scalds is exceedingly high as compared with other injuries of equal frequency. There are few if any emergent calamities which cause greater suffering to the patient or which entail greater danger to life. Not only is life dependent upon prompt measures correctly instituted but disability of most distressing and usually preventable degree is almost certain to follow haphazard or inappropriate early treatment.

A practical and simple classification of burns includes only those involving the epidermis with vesication as first degree; those involving the entire integument as second degree; and burns of underlying tissues with charring as third degree. It is well also to estimate the proportion of surface area involved thus giving a more complete knowledge of the extent and seriousness of the lesion. Berkow has perfected a method for estimation based on the ratio between parts and the total body surface, arbitrarily corrected to the greater seriousness of lesions of the chest, abdomen and genitals. In adults he rates the lower extremities 38 per cent; trunk 30 per cent; upper extremities 18 per cent; head 6 per cent. In children the proportions are different, dependent upon their age. The pathology of burns has received extensive research studies in the past few years. The rapid and continuous loss of fluid from the blood in burned patients quickly induces a marked concentration of the blood. This becomes a factor of the greatest importance in the development of the syndrome characteristic of burns and a factor of prime significance in the fate of the person concerned. Marked concentration of blood means a failing circulation, an inefficient oxygen carrier, oxygen starvation

of the tissues, and finally suspension of vital activities. The degree of blood concentration can be determined by hemoglobin readings. The late Dr. E. C. Davidson has shown that there is a marked fall in the blood chlorides inversely proportioned to the rise in hemoglobin and extent of concentration. It was his opinion that this blood concentration was best explained on a basis of loss of plasma throughout the capillary bed of the body, as in traumatic shock, rather than on the basis of loss of fluid at the site of the lesion alone.

It is evident then that any procedure to be followed in the treatment of burns must consider first and primarily the systemic condition of patient rather than the local lesion. The patient should be treated for shock, and the prevention or alleviation of serious blood concentrations. This usually includes external heat, either electric tent or blankets; the Trendelenberg position; opiates liberally, and the generous administration of fluids. From 500-1000cc of normal saline or 5 per cent glucose solution should be given intravenously every 8-12 hours, in the more serious cases. The patient should receive 100cc of fluid by mouth, by rectum, subcutaneously or intravenously for each KG (2.21 lbs.) of body weight every 24 hours. Stimulants are given as indicated.

The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.

It is only after all signs of shock (cold clammy skin, subnormal temperature, low B.P., weak thready pulse) have disappeared that the local treatment of the burn should be undertaken. A thorough cleansing of the skin around the burn as well as the burned area itself is absolutely essential in all cases regardless of the choice of local medication to be applied. A general anesthetic, nitrous oxide or ether, may be necessary and is frequently definitely indicated to insure proper cleansing. If the patient is under an anesthetic green soap, saline, ether and alcohol

are the best agents to use in the cleansing process with benzene or gasoline used to remove grease. Without a general anesthetic, green soap used on the skin around the burn and a flushing of the burned area with boric acid solution and saline will suffice. Tr. of iodine, phenol, bichloride of mercury or any of the stronger mercurial preparations had best not be used.

In third degree burns with charring and much destruction of tissue, continuous wet dressings are indicated. Dakin's Solution or chlorazene solutions are excellent for this purpose because of their antiseptic efficiency, and the former, due to its digestant action causing rapid dissolution of necrotic tissues, is especially indicated in suppurating necrotic burned surfaces. Debridement is advantageous in severe third degree burns. Vogt has demonstrated in animals that if burned areas of equivalent size and severity were permitted to remain for eight hours, the animals invariably died; but the transplantation of this burned skin to a normal animal resulted in the latter animal becoming toxic, while the burned animal was saved from a toxic death by the transplantation.

In burns of severe degrees, early skin grafting cannot be over-emphasized. Grafting is the most efficient preventative measure for thickened scars, contractures and cosmetic disfigurements. We are frequently prone to delay skin grafting because of a septic temperature and other evidence of toxicity but this will not disappear as long as large denuded areas are present. It has been shown that most grafts will take even on a septic granulating surface. The Thiersch graft consisting of longitudinal strips of skin seems generally to be preferred here. Pedicled or sliding grafts are best reserved to secondary reconstructive plastic surgery. In first and second degree burns seen early before infection has occurred, the local coagulation of the devitalized tissues with 3-5 per cent tannic acid solution is unquestionably the procedure of choice. The tannic acid treatment of burns, also attributed to the credit of the late Dr. Edward C. Davidson who originated and sponsored it, is one of the most important contributions to burn therapy during the

twentieth century. Its application is simple as it may be sprayed on the burned area with an atomizer every thirty minutes for twenty-four hours. The precipitated proteins in the coagulated surface acts as a protective coating or barrier against chemical, bacterial and mechanical action as well as against sensory and inflammatory irritation. Thus the burned patient under tannic acid treatment suffers less pain and notably less from toxemia. This waterproof coagulum prevents further loss of body fluid, combats undue radiation of body heat from the wound surface, and has definitely decreased the incidence of infection.

Advocates of other medicinal agents report good results with gentian violet, powdered zinc oxide and picric acid. The paraffin occlusive dressing of burns has largely been discontinued because of the difficult application.

The prevention of contracting scars must also be borne in mind by the medical attendant. All joints in close proximity to burned areas should be hyperextended. This can best be obtained by some method assuring constant hyper-extension, such as tying hand to head of bed, without complete immobilization of part as with plaster cast.

This subject is of crucial importance to the general practitioners of medicine and surgery and it is our responsibility to keep well informed as to the work that has been done and is now being done in the study of burns. Undoubtedly the best volume on burns to date is a recent publication by Pack and Davis. This wealth of material on burns should be accessible to everyone undertaking to treat burns. Our patients are entitled to benefit from the rapid strides of progress being made in the therapy of burns.

EDGAR BOLING, M.D.

The State Board of Health cautions the medical profession to use state antitoxin only for strictly charity patients. If you must use antitoxin for pay patients, collect in advance the price stamped on the package and remit at once to the Board. Use immunizing antitoxin (1,000) unit package only for small children who have been intimately exposed. If you furnish antitoxin to other physicians, see to it that it is to be properly used for charity patients, or collect from the physician in advance.

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Jas. N. Brawner.....	Atlanta
Ralston Lattimore.....	Savannah
Jas. L. King.....	Macon
Chas. A. Greer.....	Oglethorpe

Fraternal Delegate to the Georgia Pharmaceutical Association

C. L. Ridley.....	Macon
Fraternal Delegate to the Georgia Dental Association.....	

C. Hall Farmer.....	Macon
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Fraternal Delegates to Other State Meetings

To visit Alabama: F. B. Blackmar, Columbus; O. W. Roberts, Carrollton.	
To visit Florida: Arthur G. Fort, Atlanta; J. M. Smith, Valdosta.	
To visit North Carolina: C. W. Roberts, Atlanta; D. D. Walker, Macon.	
To visit South Carolina: Thos. M. Adams, Monte- zuma; Robt. L. Rhodes, Augusta.	
To visit Tennessee: W. W. Chrisman, Macon; M. M. McCord, Rome.	

Committee for Study of Maternal Mortality and Infant Deaths

First District

Guy G. Lunsford.....	Millen
A. J. Waring.....	Savannah

Second District

I. M. Lucas.....	Albany
S. L. Cheshire.....	Thomasville

Third District

Carl P. Savage.....	Montezuma
J. C. Patterson.....	Cuthbert

Fourth District

Thos. S. Bailey.....	Newnan
S. C. Rutland.....	LaGrange

Fifth District

J. R. McCord.....	Atlanta
M. Hines Roberts.....	Atlanta

<i>Sixth District</i>	
Edward B. Claxton.....	Dublin
J. D. Applewhite.....	Macon
<i>Seventh District</i>	
P. O. Chaudron.....	Cedartown
J. E. Lester.....	Marietta
<i>Eighth District</i>	
John W. Simmons.....	Brunswick
G. T. Crozier.....	Valdosta
<i>Ninth District</i>	
M. B. Allen.....	Hoschton
D. H. Garrison.....	Tate
<i>Tenth District</i>	
S. S. Smith.....	Athens
Wm. A. Mulherin.....	Augusta
<i>Ex-Officio</i>	
T. F. Abercrombie, Director, Department of Public Health for Georgia.....	Atlanta
L. G. Hardman Silver Loving Cup	
W. A. Selman, Chairman.....	Atlanta
Wm. A. Mulherin.....	Augusta
Chas. H. Watt.....	Thomasville
William H. Myers.....	Savannah
Chas. C. Harrold.....	Macon
Allen H. Bunce.....	Atlanta

GEORGIA PEDIATRIC SOCIETY

Program of First Scientific Meeting

October 12th, 12:30 P.M.
BILTMORE HOTEL, ATLANTA
LUNCHEON

Scientific Session 2:00 P.M.

1. The Use of Carbohydrates in the Diet and Treatment of Infants, Dr. Arthur F. Abt, Chicago, Ill. Associate in Pediatrics, Northwestern University School of Medicine.
2. Allergy in Children, Dr. Horton Casparis, Nashville, Tenn. Vanderbilt University School of Medicine.
3. A Demonstration Relating to Gastro-Intestinal Tract, Anorexia, the Different Forms of Ptois, Mucous Gastritis and Intestinal Dysfunction, Dr. Charles G. Kerley, New York, Professor Emeritus, New York University School of Medicine.
4. Symposium on "Tuberculosis in Children": The General Problem of Tuberculosis—Dr. Horton Casparis, Nashville, Tenn. The X-ray Phases of the Problem—Dr. J. J. Clark, Atlanta. The Diagnosis and Treatment—Dr. Kellie Joseph, Alto, Ga., State Tuberculosis Sanitarium.

7:00 P.M.—ACADEMY OF MEDICINE, ATLANTA BUFFET SUPPER

The Atlanta Pediatric Society will be host to the Georgia Pediatric Society and the members of the Fulton County Medical Society and their wives at a buffet supper, Academy of Medicine.

1. Welcome Address,
Dr. W. E. Barber, President of Fulton County Medical Society.
2. Response,
Dr. W. A. Mulherin, Augusta, Ga.
3. The Mental Health of Children,

Dr. Horton Casparis, Nashville, Tenn.

Introduction by Dr. M. Hines Roberts.

Discussion: Dr. W. W. Young, Atlanta.

4. Anemias of Infants (Illustrated with Slides),
Dr. Arthur F. Abt, Chicago, Ill.
Introduction: Dr. Benjamin Bashinski, Macon.
5. A Symposium on the Tired Child; Functional Neurosis; References to the Late Mental Development with Encephlograms; Clinical and Radiographic Studies of the Sinuses in Infants and Children in Health and Disease.
Dr. Charles G. Kerley, New York.
Introduction: Dr. Charles E. Boynton, Atlanta.

Officers

- President—Dr. Joseph Yampolsky, Atlanta.
President-Elect—Dr. Benjamin Bashinski, Macon.
Vice-President—Dr. Wm. W. Anderson, Atlanta.
Secretary-Treasurer—Dr. Roger W. Dickson, Atlanta.

MEETING OF FIFTH DISTRICT MEDICAL SOCIETY

ACADEMY OF MEDICINE, ATLANTA
OCTOBER 5, 1933

6:30 P.M.

Dr. and Mrs. Frank K. Boland will be hosts at a buffet supper to the members of the Fifth District Medical Society and Fulton County Medical Society and their wives at the Academy of Medicine.

PROGRAM 7:15 P.M.

1. Address of Welcome,
Dr. W. E. Barber, Atlanta, President of Fulton County Medical Society.
2. Response to Address of Welcome from the Medical Association of Georgia,
Dr. C. H. Richardson, Macon, President of the Medical Association of Georgia.
3. The Treatment of Procidientia Uteri by the Vaginal Route (Moving Pictures),
Dr. Olin S. Cofer, Atlanta, Visiting Gynecologist to the Grady (Municipal) and Georgia Baptist Hospitals.
Discussion: Dr. Amey Chappell, Atlanta.
4. Experimental Hemothorax,
Dr. Dan C. Elkin, Atlanta, Professor of Surgery, Emory University School of Medicine, and Dr. J. C. Sandison, Atlanta, Fellow of Whitehead Research Surgical Laboratory, Emory University School of Medicine.
Discussion: Dr. Henry Poer, Atlanta.
5. The Neurotic Patient,
Dr. J. S. McLester, Birmingham, Ala., Professor of Medicine, University of Alabama School of Medicine.

Discussion: Dr. Lila Bonner Miller, Atlanta.

6. The Pressing Problem of Cancer of the Stomach,
(Continued on Page 355)

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

THE INFANT'S CHANCE

It is most heartening to study statistics when they prove that your efforts have been rewarded. Many babies are being given an opportunity to live that formerly died of summer complaint. Mothers are realizing that teething does not kill babies but that disease germs are the cause. Cleanliness has much to do with the sickness rate in babies under two years old. Proper food properly kept and rightly prepared, protected against flies, means safety. All of the above is said because we want you to know that our physicians and nurses, with the co-operation of interested parents, have made possible the reduction in deaths of our babies to the number of 468 in the past two years. In other words, had the same rate prevailed in 1932 as in 1930, the loss of babies would have been 468 more than it really was.

In 1930 the deaths from enteritis were 721, and from dysentery 305 or the total of 1,026. In 1932, enteritis claimed 390 babies and dysentery 141, making a total for the two years of 531 deaths. The lives saved in the two year period were 495. If one of these babies was yours it was good work, was it not?

Quite often food fads are not conducive to proper nourishment. Food, just plain natural food, is most likely to do more good than many of the special things in paper cartons.

The findings of the preschool groups indicate the need of the child but it requires co-operation of all interested groups to get corrections made.

Dog bites should have immediate attention, and the advice of the family physician should be followed.

DEATHS FROM DIPHTHERIA

The State Board of Health is not at all satisfied with the death rate from the preventable disease of diphtheria. No one is.

There is no excuse for any child having diphtheria. Neglect of the parent in not having the baby protected is inexcusable with present day knowledge. The cost of the toxoid is almost nothing compared to its good result. Protection is as near perfect as is possible, being, it is estimated, as high as 98 per cent. The remedy costs only nine cents per child for the two doses necessary. Surely any parent can afford to spend this small amount on the baby when it reaches the age of nine months. This is only one cent per month for good protective insurance.

The records of the vital statistics department of the State Board of Health show that in 1930 we had 135 deaths from diphtheria; in 1931, 158, and in 1932, 168. Of these deaths, in counties with full

time commissioners of health, in 1930 numbered 49, in 1931, 61 and in 1932, 62. In counties without an organized health unit in 1930 there were 86 deaths; in 1931, 97, and in 1932, 107. In seven of the counties with health officers there were no deaths at all. These counties are as follows: Clark, Decatur, Dougherty, Grady, Jenkins, Mitchell, and Ware. How many counties will join this list in 1933?

WHY DELAY EXAMINATION?

The death rate from cancer is increasing; many diseases show a decline; why is this so? Some of our clinicians think that in part, at least, it may be due to false modesty on the part of women. This should not be so; any woman who has a lump in her breast should not delay a single day, but know what it is. Any woman who has an unusual discharge should know and know quickly why she has it. Delay is always dangerous, but especially so in cancer. "Early discovery, quick recovery." "Know the truth and the truth shall make you free."

Go to a good doctor.—Georgia's Health.

MORE ABOUT TOXOID

For several years we have been gathering information regarding the use of toxoid and toxin-antitoxin with special reference to their comparative value. We have long been satisfied that toxoid is much more effective as an immunizing agent than toxin-antitoxin, particularly for children under six or seven years of age. There have been, however, one or two details of administration which have been subject to controversy. One of these is the question of interval between doses of toxoid. Another is the minimum age toxoid may be used effectively.

Perhaps there is no more experienced and reliable authority on the subject of immunization against diphtheria than Dr. William H. Park, Director of the Department of Health Laboratories in New York City.

In the June, 1933, issue of the *Journal of the American Public Health Association* Doctor Park presents a terse but most informative discussion of his experience with toxoid. Every physician and health officer should read this article. As to the interval between dosage, Doctor Parks states as follows: "The interval between injections of toxoid should be 'two weeks or longer, but where it is much more convenient to make the interval only a week, it is proper to do so.'" As to the minimum age, Doctor Park concludes that toxoid may be given "at any age after three months." The choice of time is probably six months.

One other advantage mentioned by Doctor Park is that toxoid is much more stable than toxin-antitoxin.

The efficiency of toxoid ranges from 92 per cent to 98 per cent as compared with a range of 65 per cent to 80 per cent for toxin-antitoxin. Since toxoid may produce uncomfortable (though not dangerous) reactions in older children and in adults, it is advisable that for children above seven toxin-antitoxin be used, followed six months later by the Schick test to determine if immunity has been produced.

Both toxoid and toxin-antitoxin are supplied by the State Board of Health at \$1.35 for the 30 c. c. bottle. Only orders signed by physicians are recognized.

Since diphtheria becomes prevalent in the late summer and fall months, parents are urged to have their children immunized early so that they will have time to develop immunity before opportunities for exposure occur.

PHYSICIANS' INSTITUTE

The five extension courses for the physicians of Georgia have been completed. They were conducted by physicians selected by the Dean of Emory University, Dr. R. H. Oppenheimer. The schools were held at Valdosta, Statesboro, LaGrange, Athens, and Rome. The enrollment was 172 physicians representing 43 counties. Eight physicians outside of Georgia attended making a total of 180 physicians enrolled.

The first day of each school the wives of the physicians were invited; 73 accepted the invitation.

It is to be hoped that next year more places of contact can be arranged and a larger number of doctors enrolled.

Sanitation of a community is always good. It is fundamental. It brings results. A number of Georgia towns and cities are moving to take advantage of federal aid in doing this necessary work.

Most of our typhoid fever can be directly traced to the human carrier. Drinking water may occasionally be the source.

MEETING OF THE FIFTH DISTRICT MEDICAL SOCIETY-PROGRAM

(Continued from Page 353)

Dr. J. Shelton Horsley, Richmond, Va., Past President of the Southern Medical Association.
Discussion: Dr. J. L. Campbell, Atlanta.

OFFICERS

President—Dr. Joseph Yampolsky, Atlanta.
Vice-President—Dr. Geo. W. Fuller, Atlanta.
Secretary-Treasurer—Dr. H. H. Askew, Atlanta.
Ass't Secretary-Treasurer—Dr. Edgar Boling, Atlanta.
Councillor—Dr. W. A. Selman, Atlanta.
Vice-Councillor—Dr. Marion C. Pruitt, Atlanta.

SIXTH DISTRICT MEDICAL SOCIETY

The Sixth District Medical Society met at Hotel Dempsey, Macon, June 28, 1933, as guests of the Bibb County Medical Society. The President, Dr. Benjamin Bashinski, presided. Invocation by Rev. Silas Johnson. The scientific program was as follows:

1. *Cardiac Arrhythmias*—Dr. Fred Webb, Macon.

The mechanism, pathology, symptomology and treatment of these conditions were presented. Doctor Webb stressed particularly the essential similarity of factors involved in the different types of arrhythmias. In discussion, Dr. T. E. Rogers emphasized the need of clinical judgment and the helpfulness of the electro-cardiogram. Dr. C. C. Hinton mentioned the danger of over digitalization. Dr. S. T. R. Revell cited cases and urged adequate digitalization.

2. *Classification and Treatment of Diarrhea*—Dr. R. C. Goolsby, Jr., Macon.

In this paper the diarrheas of infancy and childhood were comprehensively surveyed and classified on an etiological basis. Clinical characteristics and treatment of the different types were presented.

3. *Amyotrophies and Myotrophies*—Dr. S. T. R. Revell, Louisville.

Muscular atrophies and muscular dystrophies were thoroughly described and differentiated and the subtypes of each given. This paper was discussed by Dr. H. C. Atkinson.

4. *Acute Pains in Muscles, Nerves and Joints*—Dr. H. C. Atkinson, Macon.

Among the etiological factors mentioned for these conditions, the importance of abscessed teeth was especially emphasized. Symptomatic treatment with heat and judicious massage was recommended with special reference to the use of diathermy. In discussion, Dr. W. A. Newman described his method of telling from x-ray plates which teeth are dangerous. Dr. G. Y. Massenburg and Doctor Revell discussed and illustrated the importance of the functional element in these cases.

5. *Glaucoma*—Dr. J. Allen Smith, Macon.

The nature, symptoms and treatment of this condition were presented with special discussion of the danger of failure to recognize its presence when eye conditions are treated by those who are inadequately qualified. Doctor Watson agreed particularly with this latter point in his discussion.

6. *Case Reports*—Dr. G. Y. Massenburg, Macon.

The first case reported and also presented before the society was a woman who had a compound fracture of both bones of the leg. She got a good functional result without operative procedure.

The second case illustrated an operative treatment for an ununited fracture of the hip with good results.

These cases were discussed by Dr. C. C. Harrold and Dr. O. H. Weaver.

7. *Some Aspects of Mental Hygiene in Children*
—Dr. William H. Kiser, Jr., Atlanta.

As guest speaker representing the Georgia Pediatric Society, Doctor Kiser presented a comprehensive survey of the essential factors involved in this field using charts to visualize his grouping of these conditions.

In discussion Doctor Farmer raised some questions in regard to handling of the juvenile delinquent; Doctor Gay, of Atlanta, emphasized the importance of the parents in the mental hygiene of childhood; and Doctor Yarbrough discussed the Freudian aspect of these problems.

Luncheon was enjoyed in a private dining room of the hotel.

Dr. C. H. Richardson, President of the Medical Association of Georgia, gave an address dealing chiefly with present day economic and social factors as they concern the private practice of medicine. He warned against the socialization of medical practice and the loss of individualism.

The minutes of the previous meeting were read and adopted. The financial report was made by the Secretary-Treasurer and accepted.

Motion introduced by Dr. S. T. R. Revell and carried that hereafter each member who attends a semi-annual meeting of the society pay \$1.00 to defray expenses so that entertainment of the society would entail no expense to local societies.

The following officers were elected for the ensuing year:

President—Dr. S. T. R. Revell, Louisville.

Vice-President—Dr. Y. H. Yarbrough, Milledgeville.

Secretary-Treasurer—Dr. H. C. Atkinson, Macon.

After an invitation extended by Dr. Richard Binion of the Baldwin County Medical Society, Milledgeville was selected as the place for the next meeting on Wednesday, December 6, 1933.

H. C. ATKINSON, M.D.
Secretary-Treasurer.

PROBLEM CASES

Newdigate M. Owensby, D.M., writing on Problem Cases in the June number of the Claim Investigator, Atlanta, Ga., states that the increasing numbers of problem individuals who are either liabilities or potential liabilities to the business, insurance or professional worlds have brought a demand for more accurate methods of dealing with the human equation and personality defects. A better understanding is wanted of the underlying factors that will cause a person to disregard whatever abilities he actually possesses and allow himself to become an incumbrance on his family or society. Religious training, character analysis, vocational tests, measurements for job fitness and other well intentioned hypotheses have been tried but met with failure. Psychological tests are certainly not diag-

nostic. Human nature and personalities, both normal and abnormal, are entirely too complex for such simple measures to furnish a correct explanation for their changes. Endocrinology cannot furnish a satisfactory explanation. Personalities and human behaviour are influenced by too many varied and changeable factors, anatomical, biological, physiological, chemical, bacteriological, pathological, sociological, environmental, et al, to ever become so static that any one weight rule, test, or measurement, however delicate, will be able to indicate the future personality success or failure of any given individual. One must know and understand all the factors that are involved in forming one's personality and the intricate way in which they influence it before they can reasonably hope to correct any personality defect however minor it may be. The medical profession has a more comprehensive knowledge of all the underlying factors involved than does any other profession and it is to them that our hopes must be directed for a solution to personality problems. Unfortunately the medical schools have heretofore directed their efforts to correlating the basic sciences with physical disease and have neglected to correlate them with personality and behavior disorders. It has therefore been necessary for their graduates to pursue lengthy institutional training and post graduate study in order to properly evaluate personality disorders and to correlate all the factors which are interdependent in maintaining physical and mental health. Those physicians who have undertaken this graduate study in nervous and mental illness, personality problems, behavioristic disorders, as well as the gross and microscopic pathology of the brain and nervous system, are known as psychiatrists, or neuropsychiatrists. There are less than fourteen hundred such physicians in the United States and Canada, of whom approximately ninety-eight per cent are occupying institutional positions. Because of their predilection for institutional work, psychiatrists have unfortunately but very naturally been thought to be incapable of diagnosing or treating any ills but mental and nervous. Should one consider the enormous numbers of mentally and nervously ill people confined in institutions and who are subject to every known physical ill, as well as the difficulties with which the psychiatrist is confronted in making a correct diagnosis, it would easily be understood why psychiatrists are also good clinicians. Moreover psychiatrists must separate the organic from the functional ills and that requires an unusual degree of acumen. When the professional and business worlds become educated to the psychiatric method of approach to problem cases they will realize that herein lies the correct explanation and solution to their difficulties. Moreover the medical profession will have gained a tremendous victory over those cults which are always trying to usurp their prerogatives.

Application may be filed with the U. S. Civil Service Commission, Washington, D. C., on or before September 28th, to qualify in at least one branch of twelve optional branches of medical service.

WOMAN'S AUXILIARY OFFICERS

President—Mrs. J. Bonar White, Atlanta.

President-Elect—Mrs. J. E. Penland, Waycross.

First Vice-President—Mrs. J. J. Pilcher, Wrens.

Second Vice-President—Mrs. R. C. Pendergrass, Americus.

Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.

Corresponding Secretary—Mrs. E. A. Allen, Atlanta.

Treasurer—Mrs. Chas. Usher, Savannah.

Historian—Mrs. E. R. Harris, Winder.

Parliamentarian—Mrs. J. M. Barnett, Albany.

Editor—Mrs. W. A. Selman, Atlanta.

FIRST DISTRICT MEETING

The Woman's Auxiliary to the First District Medical Society met at Savannah, July 18th. Mrs. L. Fielding Lanier, Sylvania, District Manager, presided. Eight counties were represented.

Welcome Address by Mrs. J. C. Metts, Savannah.

Response to Address of Welcome by Mrs. Cleveland Thompson, Millen.

Reports of county Auxiliaries were given by the following: Tri County Auxiliary by Mrs. A. J. Mooney, Statesboro; Chatham County by Mrs. William Shearouse, Savannah; Screven County by Mrs. L. F. Lanier, Sylvania.

Mrs. Wm. H. Myers, Savannah, reported the selection of a form of Scrapbook. The Auxiliary adopted the style and form of book which will be used by other districts. This will make all scrapbooks by constituent organizations of the Auxiliary uniform.

Mrs. Wm. H. Myers, Savannah, gave a report on the annual session of the Auxiliary to the American Medical Association held at Milwaukee in June. She led the singing of some of her favorite songs at one of the luncheons in Milwaukee. Officers of the National Auxiliary complimented the report of the work by our state organization and stated that the members of Georgia have an excellent vision of the activities to be promoted and sponsored by our Auxiliary.

Mrs. Julian K. Quattlebaum, Savannah, read a communication by our President, Mrs. J. Bonar White, Atlanta.

Mrs. J. E. Penland, Waycross, President-Elect, read a paper entitled "Why an Auxiliary?"; Mrs. V. H. Bassett, Savannah, "The Swallow and Mosquitoes."

Dr. J. C. Metts, Savannah, spoke on "The Nervous Child."

Officers elected were: Mrs. Lee Howard, Savannah, Manager; Mrs. Jno. W. Daniel, Claxton, Vice-Manager; Mrs. J. S. Howkins, Savannah, Parliamentarian; Mrs. E. N. Gleaton, Savannah, Secretary-Treasurer.

Entertainment and luncheon were the concluding features of the meeting.

TENTH DISTRICT MEETING

The Woman's Auxiliary to the Tenth District Medical Society met at the home of Dr. and Mrs. B. C. Teasley, Hartwell, August 9th. Mrs. T. H. Johnson, Athens, District Manager, presided. Seven counties were represented.

Address of Welcome by Mrs. A. O. Meredith, Hartwell.

Response to Address of Welcome by Mrs. T. H. Johnson, Athens.

Reports from four county Auxiliaries and from the membership at large showed a fine spirit of cooperation with other organizations for health and philanthropic work.

Dr. Chas. H. Richardson, Macon, President of the Medical Association of Georgia, spoke on the education of the people for the detection of early cancer.

Dr. C. L. Ayers, Toccoa, spoke of the responsibility of being a doctor's wife and the many ways she served her husband and the medical profession.

Mrs. J. Bonar White, Atlanta, President of the Auxiliary, urged members to accept individual responsibility for the extension of Mother-Welfare work. She assured them that each member had an important duty to perform which was as necessary as the duties of officers and chairmen to promote this educational program. Mrs. White stated that if the district Auxiliary was instrumental in saving one mother and one child annually, the work would be a grand success. The three minute talks approved by the Auxiliary should be memorized by all members so that they could be repeated by any member when called upon on any occasion.

Mrs. Paul L. Holliday, Athens, read an excellent and original paper on "Achievements of Noted Georgia Physicians—Doctor Banks and Dr. H. F. Campbell." Copies will be filed with the state Auxiliary.

Copies of the Constitution and By-Laws also of "Our Tasks" were given to presidents of county Auxiliaries for distribution.

Mrs. Ralph H. Chaney, Augusta, Corresponding Secretary of the Auxiliary to the Richmond County Medical Society, extended

an advance invitation to all members to attend the next annual session to be held at Augusta, May 8, 9, 10, 11, 1934.

The daughters of members entertained with a delightful musical program.

Mrs. Johnson, Chairman, introduced Mrs. Olin S. Cofer, Atlanta, Manager of the Fifth District; Mrs. F. R. Wrenn, Anderson, S. C., President of the Woman's Auxiliary to the South Carolina Medical Association; and Mrs. Harper, daughter of Dr. Crawford W. Long, who addressed the meeting.

Officers elected were: Mrs. D. M. Carter, Madison, Manager; Mrs. Ralph H. Chaney, Augusta, Manager-Elect; Mrs. A. O. Meredith, Hartwell, Secretary-Treasurer; Mrs. Stewart D. Brown, Royston, Parliamentarian.

The Auxiliary and the Hart County Medical Society were hosts at a delectable barbecue. This meeting exemplified the good fellowship and understanding of the high ideals of the Auxiliary.

NEWS ITEMS

Dr. Thos. H. Hancock, Atlanta, was presented with a forty-year service pin by the Georgia Power Company on September 1st. He is chief surgeon for the company. The pin is studded with diamonds and has a citation for faithful service.

Dr. and Mrs. E. H. Lamb, Cornelia, entertained members of the Habersham County Medical Society and the Auxiliary at their home on August 10th. A salad course with tea, cake and cream was served. Dr. C. L. Ayers, Toccoa, President-Elect of the Association, spoke during the business meeting of the Society.

Dr. W. L. Moss, Augusta, Dean of the University of Georgia Medical Department, announces the establishment of a new department of bacteriology and the appointment to the faculty of the following: Dr. Jas. A. Kennedy, formerly with the University of Rochester School of Medicine, New York; Dr. F. C. Lee, formerly with Johns Hopkins Hospital, Baltimore; Dr. J. O. Pinkston, formerly with Harvard University Medical School, Boston; and Dr. M. S. Dooley, formerly with the Syracuse University College of Medicine, Syracuse, N. Y.

The Ninth District Medical Society met at Conna-hayne Lodge near Jasper on September 20th. Dr. Grady Coker, Canton, read a paper entitled "Rare Findings in the Surgical Abdomen"; discussed by Dr. J. K. Burns, Gainesville. Dr. Dan C. Elkin, Atlanta, "Treatment of Aneurism"; discussed by Dr. Eugene L. Ward, New Holland. Address by Dr. C. L. Ayers, Toccoa, President-Elect of the Association. Lunch was served at the Lodge at noon. The afternoon was de-

voted to fishing, swimming and a golf tournament. Trophies were awarded for the high and low scores.

The Randolph County Medical Society met at Cuthbert on September 7th. The scientific program consisted of reports of cases by members and visitors.

Members of the new State Board of Health were sworn in by Governor Eugene Talmadge on August 30th. In the reorganization of the Board. Hon. Robert F. Maddox, Atlanta, was elected Chairman; Dr. Marvin M. Head, Zebulon, Vice-Chairman, and Mr. C. L. Tinsley, an employe of the Board, Secretary. Mr. Maddox was host to the members at a luncheon given at the Capital City Club, Atlanta.

The first inscription for any member of the Medical Association of Georgia to be placed on the L. G. Hardman Silver Loving Cup is as follows: "Doctor Roy Rachford Kracke, Atlanta, Ga., for important contributions in the field of hematology, Eighty-Fourth Annual Session of the Medical Association of Georgia, May 9-12, 1933, Macon, Ga."

The Ware County Medical Society met at Homer-ville on September 6th. Dr. H. G. Huey, Homer-ville, gave reports of cases as follows: "Pernicious Anemia," "Epithelioma of the Forehead," "Aortic Dilatation," and "Pyloric Stenosis." Dr. Huey was host to the members at dinner.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on September 7th. Dr. Murdock Equen, Atlanta, gave a case report, "Laryngeal Cancer—Demonstration of Artificial Larynx"; Dr. J. J. Clark, Atlanta, gave a clinical talk, "Examination of the Colon; X-Ray Pictures"; discussions were led by Dr. E. D. Shanks, Dr. R. S. Leadingham and Dr. Thos. P. Goodwyn, all of Atlanta.

Dr. J. O. Elrod, Forsyth, and Dr. C. F. Griffith, Griffin, were reappointed to the State Board of Medical Examiners for four years, terms ending September 1, 1937. Dr. D. T. Rankin, Milledgeville, was appointed for an unexpired term ending September 1, 1934.

Dr. Grady N. Coker, Canton, is in Chicago to see the Century of Progress Exposition, will visit Rochester and the Mayo Clinic for a few days and return via Washington, D. C.

Dr. Rudolph Bell, Thomasville, is at the Department of Urology of the New York Hospital, New York City, taking a postgraduate course.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on September 21st. Doctors on the program were: Lon Grove, J. C. Read, W. C. Waters, Mark S. Dougherty, Frank K. Boland, Wm. H. Trimble and Geo. F. Eubanks.

OBITUARY

Dr. James Herbert Smith, Amsterdam; Missouri Medical College, St. Louis, Mo., 1887; aged 69; died at his home on August 15, 1933. He was a native of Missouri, at one time Professor of Kansas Medical College, Independence, Kansas, and served as Captain of a medical corps during the World War. Dr. Smith was an estimable gentleman and had many warm friends. Surviving him are his widow and five children. Funeral service and interment were at Calvary.

Dr. J. G. Martin, Milner; Atlanta School of Medicine, Atlanta, 1852; aged 81; died at his home after a long illness on August 8, 1933. He was born and reared at Camp Hill, Ala., moved to Milner while a young man and resided there for sixty years until the time of his death. He claimed the distinction of being the oldest living graduate of the Atlanta School of Medicine. Dr. Martin had for many years an extensive practice in Decatur and adjacent counties and was held in high esteem by hundreds of friends. Surviving him are the following children: Frank and R. A. Martin; Mrs. Chas. Crawley, Mrs. F. P. Wilson, and Mrs. H. J. Scott, all of Milner. Funeral services were conducted from the Milner Baptist church and interment was in the village cemetery.

Dr. James Dawkins Cromer, Atlanta; University of Nashville Medical Department, Nashville, Tenn., 1894; aged 65; died at Wesley Memorial Hospital, Emory University, on August 31, 1933. He was born in Newberry county, S. C., and received his early literary education at Bell Buckle, Tenn. After he graduated in medicine, he studied in Vienna for one and one-half years, began practice in Texas, within a few years moved to Atlanta. Dr. Cromer established a wide general practice in Atlanta, was on the staffs of the Georgia Baptist Hospital, Wesley Memorial Hospital and Grady Hospital. He did an extensive charity practice. At the time of his death, he was in charge of the A. G. Rhodes Home for Incurables on South Boulevard. Dr. Cromer served in the medical corps during the Spanish-American war, and as Captain during the World war. He was a member of Fulton County Medical Society, Masons, Shrine and the Druid Hills Methodist church. Surviving him are his widow, one son, J. D. Cromer, Jr., and a step-daughter, Mrs. V. L. Walker, Mobile, Ala. Funeral services were conducted by Dr. Ryland Knight from the Spring Hill Chapel. Interment was in Oakland cemetery.

MISS MYRTLE TYE

Resolutions upon the death of Miss Myrtle Tye, Librarian of the A. W. Calhoun Medical Library of Emory University School of Medicine, adopted by the Library Committee.

In the death of Miss Myrtle Tye, Librarian of the A. W. Calhoun Medical Library since its organization, the Library and Emory University have been

deprived of a valuable executive, and the medical profession of Atlanta and the South have lost a helpful friend and counsellor.

By her loyal devotion to her work, and through her intelligence, training and energy, she developed an institution of far-reaching importance to students of medicine, undergraduates and graduates. Much of the literature and original research work which has emanated from the Emory University School of Medicine was made possible by her assistance and co-operation. She contributed a large share to medical education.

Therefore, the Library Committee desires to express its deep appreciation of her worth, and her efficient services to the Library during its formative years. We deplore her death, and extend to her bereaved family our heart-felt sympathy in their great loss.

F. K. BOLAND, M.D.
F. P. CALHOUN, M.D.
R. A. BARTHOLOMEW, M.D.
GRADY CLAY, M.D.
P. E. LINEBACK, M.D.

Committee.

Atlanta, Ga., August 17, 1933.

BOOKS RECEIVED

The History and Epidemiology of Syphilis. (The Gehrman Lectures, University of Illinois). By Wm. Allen Pusey, M.D., Professor of Dermatology Emeritus, University of Illinois, sometime President of the American Dermatological Association and of the American Medical Association. Contains 113 pages. Publisher: Charles C. Thomas, Springfield, Ill. Price \$2.00 postpaid.

The Technic of Local Anesthesia by Arthur E. Hertzler, M.D., Professor of Surgery in the University of Kansas; Surgeon to the Halstead Hospital, Halstead, Kansas; to St. Luke's Hospital and St. Mary's Hospital, Kansas City, Mo., and to the Providence Hospital, Kansas City, Kansas. Fifth Edition. Contains 292 pages with 148 illustrations. Publishers: The C. V. Mosby Company, 3523-3525 Pine Boulevard, St. Louis, Mo. Price \$5.00.

Surgery of the Stomach and Duodenum by J. Shelton Horsley, M.D. Attending Surgeon, St. Elizabeth's Hospital, Richmond, Va. Contains 260 pages with 136 illustrations. Publishers: The C. V. Mosby Company, 3523-3525 Pine Boulevard, St. Louis, Mo. Price \$7.50.

Fetal, Newborn, and Maternal Morbidity and Mortality. Report of the Subcommittee on Factors and Causes of Fetal, Newborn, and Maternal Morbidity and Mortality. Hugo Ehrenfest, M.D., Chairman, White House Conference on Child Health and Protection. Contains 486 pages. Publishers: D. Appleton-Century Company, 35 West 32nd Street, New York City. Price \$3.00.

DR. MOSS ATTENDS REGENTS' MEETING IN DAHLONEGA, GA.

Meanwhile New Medical Proposals to Health Department Offered Here

Proposals of the Richmond County Medical Society for operation of the Richmond county health department along curative and preventive medical lines were outlined yesterday in a "bill of particulars" presented to the board of health by Drs. S. J. Lewis, W. C. Kellogg and H. P. Harrell.

Dr. W. A. Mulherin, member of the board, had been named a committee of one to confer with the committee from the society, and he presented to the society the intentions of the board on Friday night at the August meeting.

"In response to the request from Richmond County Board of Health to have Richmond County Medical Society make out a 'Bill of particulars,' embodying the wishes of the Richmond County Medical Society, as regards discontinuance of the practice of preventive medicine by the Richmond County Board of Health, we beg leave to submit the following reply and request:

"The practice of medicine is composed of two kinds, preventive and curative. In the natural order of things, physicians are expected to practice medicine, health agencies are expected to advise and educate the public in health matters—not practice medicine, except with the indigent, which practice is a community responsibility.

"The medical profession either has, or has not, justified its existence to date, as an essential factor in the social order of American life. If it has, and it undoubtedly has, it should receive the moral support of the laity in its practice of preventive medicine.

"There is a concerted movement in the United States today to socialize medicine, which means, when translated into practical terms, to reduce the practice of medicine from a profession to a commercial agency; thereby destroying the intimate contact between patient and physician, inhibiting the essential ambition, existing in every reputable physician, to advance the art and science of medicine for the good of humanity.

"In keeping with the above conviction, and in a spirit of fair play, the Richmond County Medical Society asks of the Richmond County Board of Health that it exclude from its activities all practice of preventive medicine, except when applied to the indigent of this county, such as: physical examinations, advice as to the care and feeding of babies, children and adults, and the administering of preventive inoculations. Such practice rightfully belongs to the domain of the medical profession."

Dr. William Moss, Dean of the Medical Department of the University of Georgia, was in Dahlonega, Ga., yesterday attending the first official conference of the State Board of Regents of the University System of Georgia.—*Augusta Chronicle*, Augusta, Ga., August 13, 1933.

COMMUNICATIONS

EDITORIAL—AUGUST JOURNAL

To the Editor:

I am sorry you had my name following the editorial, "Laboratory Aid in Diagnosis of Typhus Fever or Brill's Disease" in the last issue of the Journal. This story was prepared by Dr. T. F. Sellers, Chief of Division of Laboratories, and if any one deserves credit it is Doctor Sellers. Will you please give him credit in the next issue?

We never sign any of the articles for the Journal but prefer that only Doctor Abercrombie's name appear at the "mast head". The articles, in fact, are prepared by the heads of the different divisions as their subject matter indicates.

JOE P. BOWDOIN, M.D.

Assistant Director, Department of Public Health, Atlanta, Georgia.

September 2, 1933.

Articles Accepted by the Council on Pharmacy and Chemistry of the A. M. A., since August 2nd, are:

U. S. Standard Products Company:

Antimeningococcic Serum Polyvalent, 30 cc. vial package.

Diphtheria Toxin-Antitoxin Mixture, 0.1 L., 10 cc. vial package.

Rabies Vaccine—U.S.S.P. (Semple Method) 7 syringe packages.

Rabies Vaccine—U.S.S.P. (Semple Method) 14 vial packages.

NO COMEBACK

There are no troublesome "Comebacks" when your prescriptions are *Filled and Fitted* by



16 PEACHTREE STREET

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THE CHALLENGE TO THE GENERAL PRACTITIONER*

J. COX WALL, M.D.
Eastman

A few years ago there appeared in the journal of the medical association of another state an article with the arresting title, "Where Is the Family Doctor and What Is the Matter with the Public?" I believe that on the present occasion I cannot do better than take this title for my discussion and divide it into its component parts, considering each successively.

Where is the family doctor? From the hue and cry that is being sent out after him in medical quarters one might expect to find his name in the list of "missing persons" advertised for in the metropolitan dailies, or to hear a voice on the radio, pleading, in a parody of the old song, "Bring back, bring back, my fam-i-ly doctor to me!" And yet the family doctor is neither extinct nor in hiding. He sits here today in full force. Some 70,000 of him are registered throughout the country.

The matter is stated more accurately by the Minority Report of the Committee on the Costs of Medical Care. This report does not suggest that the family doctor has disappeared, but that he is no longer to be found at the central position of medical practice. The justification for his existence would seem obviously to demand that there is where he should be. How does it happen that he no longer occupies that place? It is an axiom of scientific medicine that a search for the cause must precede the attempt at radical cure. We must therefore inquire how it was that the family doctor came to leave the central position of medical practice.

To this query the second portion of my subject suggests a possible answer. The fickleness of the public, who is lured by the exclusiveness and intrigued by the title of "specialist"; those who run after strange gods in the shape of the irregular or the quack; the ingratitude of the public who has starved the local man out by carrying their ailments and their pocket-books off to the nearest city, these, our question suggests, are to blame. These have driven the family doctor off to the peripheries of the medical field, where those at the center must strain their eyesight to find him, and hence are declaring him dead.

Suppose we realize that nothing will ever be gained by blaming the public, which, in all its erratic and contradictory impulses, is reacting more or less helplessly to the conditions around it.

We might alter the question and say, "What is the matter with the medical profession?" That would bring us at once to the problem of medical specialism, and the family doctor, or those who speak for him, would probably become very voluble, for the opinion is pretty firmly held that it is the medical specialist, or, not to be personal, let us say, medical specialism, that has driven the general practitioner out from his place in the sun. Now, in my view of the matter, it is as futile to blame specialism as it is to blame the public. Specialism had to come. It is a step in medical development, an enormously important and beneficial step. The specialists and the general practitioners together constitute the medical profession. A house divided against itself cannot stand.

Then, there is the problem created by the presence of the irregular and the quack. In some districts the family doctor has suffered heavily from the inroads on his practice from this source.

*Read before the Medical Association of Georgia, Macon, May 11, 1933.

Well, what can we do about this? It is all right to have laws against it, but if the people want the irregular and quack, they will get them. You cannot enforce any law that will prevent a suffering human being from seeking relief where he thinks it can be found. When you are dealing with pain, you are dealing with something which will get the better of any law you may put on the statute books. And if enough people in a community want the irregular and the quack, the irregular and the quack will come into the community and will be protected against any law that may exist so long as enough people continue to want him.

Is it possible that the general practitioner is himself to blame for his situation? Has he yielded ground unnecessarily to the specialist? Can it be that he has even allowed certain of the wants of his patients to go unsatisfied until the cultist has stepped in to supply them?

Neither of these suggestions is as unreasonable as at first it might appear. We live in an age when changes come so rapidly that they may well catch us unaware. A retiring president of the Medical Society of the State of New York¹ has recently pointed out that the time span of social change has undergone a remarkable shortening since the beginning of this century. Whereas previously the span between each significant change had lasted longer, as a rule, than the period of one human life, nowadays something or other which alters the current of human relationships is taken into the everyday life of the people about every ten years. There are times when evolution puts on speed, when it moves nearly as fast as revolution, and not to fall behind at such crises means that we must be alive to the situation and put more energy than before into our own locomotion.

Life is a series of challenges. The man who fails to meet the challenge must step down. That is a law of evolution. It applies equally in the physical world and in the moral world. When evolution is running a slow course, a man may hold his position unchallenged all his life, and his son after him. But in an era like the present, every man, no matter what his position is, finds it chal-

lenged repeatedly and on every hand. And he must meet each one of these challenges if he is to keep the position he has. Every advance in the science of medicine has been a challenge which the general practitioner has had to meet or else yield a little of his place at the center of medical practice, take a few steps outward toward the periphery. Every change in the life and opportunities of the people among whom he works, whether such change has been in the way or progress or of retrogression, has been a challenge.

To take an illustration from the scientific side: Do you realize that when the stethoscope was first introduced, the same doleful sort of prophecy was made that one hears so much of today with regard to various aids to diagnosis? The physician would lose the fine clinical perceptions that he had developed through centuries of dependence on his unaided senses. But the physician met the challenge. The general practitioner learned to use the stethoscope, and what he had at first regarded as an interloper on the field of his particular skill became his inseparable companion and buttress of his strength. At that time, medical evolution, though beginning already to gather speed, was going at but a fraction of the speed of today. The general practitioner had time to meet the challenge. Had it been otherwise, had he turned his back on the new-fangled instrument, said he had neither the time nor desire to learn to use it we would today be sending our patients to a stethoscopist when we wanted information as to the condition of their thoracic organs. And our chest patients, be their ailment one that required expert study or one that was quite simple, would be regularly side-stepping us to the chest specialist for a stethoscopic opinion, just as they side-step us today to certain other specialists, without troubling to go through the formality of knocking at our door on the way.

Now in later years the challenges began to multiply, they came faster and ever faster; it became impossible for the general practitioner to meet them all. A considerable number of them he, of necessity and in duty bound, turned over to other hands, and thus the specialties grew up. The specialties have

their rightful field where the general practitioner cannot give the time to acquire the adequate knowledge and skill. The specialists are within their rights in guarding this field with jealousy and warning the general man off.

So far the general practitioner retained his place at the center of medical practice; he relinquished only what he could not use. But it seems to me that the general man rather got the habit of "passing up." And the minute he began yielding to other hands what he could have learned to do if he had been willing to make the effort, he began to slip away from this center. At first and no doubt for some time, it must have seemed to him that he was not yielding anything, but was merely leaving new fields, too narrow to interest him, to new men, who, in turn, would have neither opportunity nor desire to encroach on the field that had always been his. The specialists did encroach, they have pressed the general man further and further back. But I cannot see that this was their deliberate purpose or their fault. We are all in the service of science, we must follow where she leads.

Further and further outward have the indications for each new procedure in medicine been extended. What was deemed applicable to a few rare conditions has been found first useful, then well-nigh indispensable in a large proportion of all cases. Today the family doctor cannot even treat little Sarah's chronic colds without calling in the nose and throat man, or set little Johnnie's broken leg without calling in the roentgenologist. Consider the expansion of the field of usefulness of blood analysis. Consider how the doctrine of focal infection has sunk its tentacles into—or illuminated with its search-light, whichever metaphor pleases you better—nearly every department of general practice.

Now, I am not prepared to suggest where the line should be drawn in every instance or to be at all dogmatic as to what the general man today is not doing that he should be doing. But I do feel that in the confusion of the many challenges that have been flung to him in the last quarter century the family doctor has allowed certain parts of

his work to slip out of his hands unnecessarily and not to the advantage of his patient. Whatever the family physician can do or can learn to do adequately for his patient, it is emphatically to the patient's advantage that he should do this himself.

We hear a good deal about surgical judgment. We know that it consists in large part in coming to the correct decision as to whether or not to operate. The surgeon who operates routinely in any type of case in order to save himself the trouble of making this decision and hide from himself the fact that he lacks surgical judgment is a man whom we all look down upon and a man whom all truly capable surgeons would like to see out of their specialty. We do not hear so much about general-practitioner judgment, the judgment which means the correct decision as to whether or not a particular patient should be handed over to a specialist. Yet without a high development of this kind of judgment the modern general practitioner lacks one of his most important qualifications. You may think that I am pretty drastic in comparing the specialist with the surgical operation. The rule, when in doubt, refer, is unquestionably far safer than the rule, when in doubt, operate. But in both cases a reasonably thorough effort should be made to resolve the doubt before proceeding to the extremity. Visits to specialists, one after another, may well amount to an "extremity" for the patient's pocket-book and the patient is justified in expecting that the family physician exercise sound judgment before starting him on such a round. There is, of course, an important exception here, the first doubt of malignancy always justifying the immediate examination by the specialist.

It has become the habit to blame the public for consulting the specialist on its own initiative. I believe this is in the main our own fault. We have so often sent the patient off to a specialist on the general idea that it was the specialist's job to find out whether his services were required, without putting any real work ourselves on that problem, that it is really no wonder that the public should think the preliminary visit to our

office is a matter of needless red tape. We hear a great deal about the necessity of maintaining the personal relation between physician and patient and of not disturbing the patient's faith in his family physician. It is extremely difficult to put the "personal touch" into a corridor or vestibule and the family physician who allows himself to drift into the position mainly of corridor between his patient and a row of specialists is not going to maintain this personal relation, nor is he going to retain the patient's faith, because a certain amount of self-reliance is necessary to inspire faith.

Now, to leave the specialist and pass over to the opposite side, where dwell the irregular and the quack. What desirable thing does the patient get, when he enters the office of an irregular, that he does not get when he visits the family physician? There are several things. He gets an abundance of enthusiasm and self-reliance and an eager willingness to explain all about the new healing system in words of one syllable and with a show of simple logic that captivates the hearer. When the cultist is sincere, and many of them are, especially when they start out and before they have met the disillusionment that later overtakes them, his sincerity is of the militant order. He wants not just to get a patient, but to make a convert. While the cultist, as a rule, knows nothing of psychotherapy, and, when he is a mental healer, often goes exactly contrary to the best established concepts of psychotherapy, he almost invariably does fulfill one of the most important of psychotherapeutic requirements—he causes a turn-about in the mind of his patient—what the French refer to as "changing the ideas." He gives the patient something fresh to think about and in the best cases inspires an ardor for the new ideas which tends to quicken all his latent energies. Now, since in all chronic patients there is more or less fixity of the ideas, which all of us recognize as standing in the way of a return to health, the cultist is wielding here a therapeutic weapon which in a few cases may prove sufficient alone to make a cure and in many more will cause the patient to go about singing his praises for months.

Now, do we scientific physicians possess nothing with which to inspire our way-worn patient? Does modern medicine offer no talking points of equal value to those of the chiropractor? People have changed; the world that loved mystery and was impressed by reticence now craves enlightenment. The people already possess a considerable store of medical knowledge — half-knowledge, of course, but enough to be applied as touchstones of their physician's up-to-dateness and of his interest in them. The day of blind hero-worship is over. The intelligent patient is no longer going to have just that sort of faith in any physician. The new type of patient is one of the challenges that the general practitioner has to meet.

I might speak also of the social changes which have challenged the general practitioner—the automobile, the telephone, the radio, the increase in the number of hospitals and their wider distribution, and the progressive abandonment of the country for the town. These also have had an important part in changing his status. I might speak of preventive medicine and of public and private clinics. But all come under the head of change, and all, it seems, have demanded more and quicker adaptation on the part of the family doctor than he has been able to accomplish.

There are some who are raising the question whether, in the present organization of society, the general practitioner is needed at all, whether he should not be let die off, with just a sentimental sigh, as part of the horse-and-buggy era—revered but not regretted. But I am not one who believes that the family doctor can be spared. I do not believe that his present position away from the center of medical practice is a natural and inevitable phenomenon of evolution. I look upon him as a swimmer who has been buffeted by the waves and driven far out of his course. The wind continues high, but if he will raise his head I believe he will be able to discern certain channels where the current is already flowing back toward the desired goal. There has been a turn in the tide.

I regard the Minority Report of the Com-

mittee on the Costs of Medical Care as an ultimate challenge to the general practitioner. If he meets that challenge, with what it implies of more complete service to his patients, he will come back. If he does not meet this final challenge, which is this year being echoed far and wide in conventions of physicians throughout the land, let him be buried in peace. But I disagree, nevertheless, with the Minority Report of the Committee on the Costs of Medical Care. For this report recommends that "attempts be made to restore the family physician to his place at the center of medical practice, and apparently it thinks that he can be restored by some more or less forcible measures taken by some persons on the outside." But can he "be restored?" No, he cannot. The family doctor must come back on his own feet.

REFERENCES

1. Ross, William H.: The Influence of Social Change on the Profession of Medicine. *New England J. Med.* 205:126; July 16, 1931.

Discussion on Paper by Dr. J. Cox Wall

DR. CHAS. H. RICHARDSON, Macon:

1. *What caused the public to forsake the family physician?*

Good roads, easier access to medical centers, the restlessness which causes the average patient to feel that the best is always somewhere else than at home, and the public seeking what they considered better facilities and more modern methods.

2. *Is the general practitioner himself to blame for his situation?*

Probably in some measure he is, in his failure to provide adequate facilities for his patients in the years of his own prosperity, such as adequately equipped offices with x-ray and laboratory facilities. Also, in his failure to study and keep abreast of the changing times and newer methods. If he could learn to use the stethoscope he could learn ordinary laboratory methods and the use of the x-ray. Possibly he failed to meet the challenge of his patients demands. There was no need for him to get the habit of "passing up." Postgraduate study, medical meetings, journals and books would have brought the medical world to his door. One criticism of the general practitioner has been that he doesn't really examine his patients.

3. *Is the specialist or the man in the larger centers to blame?*

Yes, in the measure that he failed to show his appreciation for the source of his patients and failed to co-operate with the family physician in the treatment of the patient and also to promptly return him. But he was only human and took advantage of what came his way. Possibly his fees have been out of proportion to the service rendered and he showed lack

of consideration in failing to see that there was a just division of the patient's ability to pay.

4. *What part has been played in this drama by the quack and the cult?*

Advertising propaganda, and the desire of the individual to be cured by magic. Prosperity and the desire to gamble have undoubtedly played a part.

5. *Will the relation of patient and family doctor come back?*

I believe that it will for both the public and the general practitioner have learned their lesson. The specialist too has learned his and sees the need for closer co-operation and a squarer deal for the family physician.

6. *Will the cults continue to be a menace?*

Don't worry about the cults and the quacks, for nothing in this world can survive that is not built upon a secure foundation. But we might learn the lesson of a little more sympathetic interest in the imaginary, as well as the real complaints of our patients. Let us remember that the patient is entitled to a frank, honest interpretation of his case and that magic can always be overcome by the principles of cause and effect.

7. *General practitioner-judgment. When to refer?*

Work a case up thoroughly with a written history and physical examination, laboratory aids and diagnostic x-ray study and it may not be necessary. Isn't it true that the general practitioner has been somewhat amiss in this routine? When this has been done and you are still in doubt, or your findings indicate that the patient's interests can be better served by someone who has given especial attention to this field, he should have the benefits of this service. No man has ever suffered from an application of the Golden Rule.

DR. WILLIAM A. MULHERIN, Augusta: I am in thorough accord with Dr. Wall's idea, that the general practitioner is not getting his just deserts. I am also in thorough accord with the Minority Report of the Committee on the Costs of Medical Care.

It is a pity that we cannot go back to the good old days existing ten, fifteen or twenty years ago, when the family physician was held in high esteem, love, and I will say even reverence, by his patients. He was deserving of it. But those times have passed. I am very sorry that such is the case.

Here is one fact that substantiates another fact, that the general practitioner should be the essential factor in organized medicine and the practice of medicine: Eighty-five per cent of all the ills that humans are afflicted with can be taken care of successfully by a good general practitioner with his brain and professional bag. Only fifteen per cent require special attention.

Why doesn't medical practice so divide itself? My idea is, that first the medical profession, or rather the specialists, are in a measure to blame. I happen to belong to that class. I think, at times, we do

not show the general practitioner proper consideration. The general practitioner will send us a patient for our opinion. We should give it, write a letter stating that opinion, and put that patient back into the hands of the general practitioner. If that case requires special study, then the hospital has to help us out, with its facilities. Let's utilize them, make our diagnosis, put the patient back into the hands of the general practitioner as quickly as we can, and the treatment will be just as effectively carried out. I don't think that is done as frequently as it should be done.

Next, I think the public should be educated to the fact that there are lots of diseases that do not require blood chemistry, electrocardiograms, x-rays, with all the heavy expense attached to a complete examination of a patient. Neither do they require the best room in the hospital, and all the expenses that go with it. Let's be frank with them, encourage them to select what they can pay for, and what they really need.

And, lastly, like Dr. Wall, I think the general practitioner should study and keep contact with post-graduate courses, help himself, and come back on his own feet, but I do think organized medicine should help him along in a very substantial way. I have the most profound respect for the general practitioner, the work he does and how well he does it, and I have my own thoughts and belief that I couldn't do half as well, if I hadn't the facilities at hand, and could not show the same resourcefulness as he does on emergency cases. The general practitioner cannot come back any too quickly to suit me.

DR. J. C. PATTERSON, Cuthbert: This is a very timely paper and Dr. Wall is to be congratulated on the clarity with which he has presented it.

It is undoubtedly true that the many advances, fads, fancies and fickleness of the American people have caused the laity to pass the general practitioner by and he himself has developed collectively an inferiority complex. Especially is this true in the rural communities. This attitude to a certain extent, is his own fault.

He has been awed by multiplicity of the purely scientific advances made in the laboratory. But as a matter of fact he has a broader field and a much more important one, not only by applying these advances made by research in treating the sick, but for actually making scientific advances through research, that is in clinical research; which is the study of disease as manifested by signs and symptoms in the patients themselves.

We can take heart on this question from one of the late masters of medicine, Sir James McKenzie, whom you all know to have been the outstanding consultant in London, after he had reached the pinnacle of success in this great city and had made many notable advances in medicine, turned his attention to clinical research and in order to better carry out his plan of studying symptoms from beginning to end he removed

to the small town of St. Andrews, Scotland and established his institute of clinical research.

I know you have all read his "Future of Medicine," but if you will pardon me I would like to quote one paragraph from it:

"It is manifest that if symptoms are ever to be properly valued, it can only be done by those who have the opportunity to watch the individual patients through long periods of time, who see the disease at its earliest stage, or even before its inception, and who can observe its progress through all the vicissitudes of life. Manifestly that cannot be done by the worker in the laboratory or in a hospital ward. On the other hand consider the opportunities of the general practitioner. He is the only individual in the medical community who has a broad outlook on medicine, whose life work gives him the opportunity of seeing all parts of medical knowledge in its true perspective. He sees the conditions which predispose to disease; he sees its inception and the course it pursues, when it is amenable to medical treatment or passes to the time when it calls for surgical interference.

"He sees the after effects of the operation when the surgeon may claim it as a success. If he cares to inquire into the symptoms of diseases he is brought into contact with every special department and has opportunities for estimating them at their true values. Yet the general practitioner has no say in medical education or research, or in making the laws which bind him to an unintelligent performance of his duties.

"There are fields of research which block the advance of medicine which can be worked only by him. Yet what is done to encourage him? Money is poured out for research, but no one ever thinks of giving him a grant or of helping him make use of his opportunities."

This is true, he has got to do for himself, but if the general practitioner will assert himself, take advantage of his opportunities, by studying, tabulating and keeping accurate records of all the symptoms no doubt that he will be able to recognize many diseases in their incipency and predict when they will become evident. He will command respect and as Dr. Wall says, come back on his own feet.

DR. STEWART R. ROBERTS, Atlanta: Mr. President, Ladies and Gentlemen: I think this is one of the most important papers we have ever had before the Medical Association of Georgia. It is not only a good paper, but raises a question that it is incumbent upon each one of us for our professional, financial and old-age salvation to take up and study. For five years I have sat and listened to the experts of this world discuss this question, and I am still in great doubt about very much of it.

I do not agree with the Majority Report of the Committee on the Costs of Medical Care, because the minority report stands for the status quo. If you stand for the status quo you agree with minority report. The minority report was followed by the Sec-

retary of the American Medical Association and the Chairman of the Judicial Committee. The minority report was never shown to the majority of the committee. They never brought it before us at all. We didn't know what was in it. If it had been, much of it could have been incorporated in the majority report. So much for that.

The majority report was prepared for two years, was submitted to every member of the fifty members of the Committee on the Costs of Medical Care, was criticized, buried, resurrected, criticized and buried and resurrected again and criticized for two years, and then the leading sociologists and what-not criticized it for one day. They were sensible people, experts. A president of the American Medical Association living in Dallas, Texas, before an audience of 6000 people in Dallas criticized the committee because its experts were doctors of philosophy and graduates of universities in this and other countries. Did he expect us to get ignoramuses to make researches? What we need in medicine today is not hero worship, but facts. Listen to one of them. In 1900 there were 150 outpatient clinics in this country. In 1932 there were 6539 outpatient clinics, with 50,000,000 to 60,000,000 patients. Can you take 60,000,000 visits away from the practitioners of this country and not have them suffer economically? Do you realize that 97 per cent of the people in this country have an income of less than \$5000? Whenever you see a limousine go by, you think, "What an income that family must have!" Lift your hat and realize that that family belongs to the three per cent.

I have been a general practitioner and practiced in Oxford and the region roundabout, and I have practiced in the city of Atlanta, and I have been an internist, and I speak from this point of view, that if your family and mine are entitled to the medical and dental services they need, so is every man and woman and child who is an American citizen entitled to it. Are we giving that medical and dental service to them? We are not. Are they getting it? They are not. Is it your fault? I think not. Is it the laity's fault? I think not. Dr. C. W. Roberts has examined 3000 Georgians for the Industrial Commission in the last seven years, and eighty-eight per cent of them show medical and dental defects. If eighty-eight per cent show those defects are we rendering service to the people? Now why? Dr. Wall said in his paper that there are times when evolution proceeds so rapidly that it almost amounts to revolution. And he does not realize how bravely and wisely he spoke. The science of medicine has far outrun the art of medicine. Take an arthritic that we were discussing. It takes a laboratory man, an x-ray man, an orthopedic man, a general practitioner, an internist, and perhaps a surgeon, to care for him. Do you mean that an internist, like myself, can solve that case? Do you mean a laboratory man can? He cannot. Do you mean a mere general practitioner can? He cannot. It takes a group. My friend, Dr. Allen, and his son and associates have established a

group. Do you mean to tell me that he is not a better doctor because of his association with his son, and that his son is not a better doctor because of his long association with his father and the terrific sum of experience that his father has accumulated? The result of your experience is experience, and the result of your efficiency is efficiency.

The specialist sees but a minor part of the whole patient. Take my friend, Dr. Crawford, the otorhinolaryngologist. He sees the ear, nose and throat. What does he know about the heart or the throbbing problems of the personality that cause the pathology of the circulation?

Let's go back a minute. I say the science of medicine has outrun the art of medicine. How many of you, each day, every hour, see a patient that you would do so much for, that you know scientifically what to do for, if you could? But the art won't permit it. You haven't the time, the patient hasn't the time or money, and he would think it was foolishness.

The art has outrun the equipment, and the equipment has outrun the ability of the people to pay. The average income per year in good times of the tenant farmers of Georgia, with a family of five, one mule and one cow, is \$350 a year. I have investigated the rural families in middle Georgia. One of them, a husband and wife and six children, made two bales of cotton, and had a net income of \$15 for the year. And the doctor charged \$5 a visit. It was out in the country. They could have three visits, no clothes and nothing else. There was no church, no sanitation.

The general practitioner is not at fault. The minority report says a good general practitioner can cover eighty-five per cent of the sickness. I do not believe it. I have studied all my life, and as a general practitioner I was not able to do it. It also assumes that all general practitioners are on the same range, equal training and good judgment, but they vary as much as poverty varies from a millionaire. There are all kinds of general practitioners and doctors.

What is going to happen to the counties in Georgia when all the general practitioners who are now over fifty years old, die? Tell me that. What is going to happen when these communities have no doctors? Then the state is either going to pay them or the government is going to pay them, or those people are going to have no medical attention; and the people of this country are going to have medical attention.

I don't care whether my good friend over there agrees with the minority or the majority report. That is a small matter. The supreme thing is this, that we begin to study this question, and that you write to the Julius Rosenwald Foundation in Chicago and get the summary of all the work of the Committee on the Costs of Medical Care. Read it and decide where you belong, and see where you can improve the situation. Get the majority-minority reports of the committee from the University of Chicago

Press, and read it over and think about it and talk about it to your general practitioners and to your friends.

Herbert Hoover used an expression that described the temperament of the medical profession more acutely than any expression I have ever heard. He said that America was founded on rugged individualism. And the trouble with the profession today, as my friend Dr. Ganes told me, is that we are extreme individualists and very poor people at cooperation. We must do group thinking, and we must do group thinking, and we must do group thinking, and then we will cooperate, and then we will get together. Get together, have one laboratory technician in the county or the district, quit sending so many patients to the city. There is no use, if a man will organize himself. And Dr. Patterson was wisely correct when he said that the average general practitioner, of whom there are 75,000 out of 123,000 practicing doctors in this country, should organize themselves and get over this inferiority complex. I don't mean coming to a medical meeting, but organize and get together in a group. The Allens have done it, the Wise Brothers have done it, the Carbons and the Mayos have done it. And, gentlemen, if we have to choose between making a living for ourselves and our family and organized medicine, the average man is going to choose making a living for his family. The Pacific Coast is organized. The term "contract practice" is a misnomer in medicine today. Write to Dr. Raymond Wilbur, at Stanford, Chairman of the Medical Educational Committee of the A. M. A., if you don't believe it. He ought to know.

DR. WILLIAM A. MULHERIN, Augusta: We all enjoyed hearing Dr. Stewart Roberts talk. I think he can take black and prove to you that it is white. He is magnetic, and he is a silver-tongued orator. But with all this, there are a few things he said that I think should be critically analyzed.

There is no question in my mind that this job of regulating medical practice belongs to the medical profession and not to the socialistically inclined big moneyed foundations. Again, I believe that any change that should be made in medical practice should be by the process of evolution and not by revolution. I am of the firm belief that the medical profession possesses enough brains in its membership to make any changes in practice that are necessary today.

If the medical profession is spineless enough to let the big foundations come in as a third party, to tell us how we should conduct our profession, it is quite certain that the following results will be forthcoming: With their proposed plan of massive production in medical practice, gathering physicians together, assigning them so many cases a day, destroying that intimate relationship between physician and patient, which is the very essence of proper medical practice, discouraging initiative and study of patients by physicians, thereby retarding the advancement of

medical and surgical science, a true revolution would be produced. Instead of medical practice remaining an honorable profession, it would be reduced to a commercial agency, and the good of humanity would suffer decidedly from the change.

When the insurance feature, as proposed by the majority report, backed by the moneyed foundations would be operative, then physicians, who pride themselves on being professional men, would be demoted to the position of an ordinary laborer. We all know that when a government, state or community dispenses money for any work, they command those who are the beneficiaries. In this case, politicians would come into the picture as a third party, and these politicians would tell the doctors what to do and what not to do. If they did not heed their demands they would get other physicians who would. By such procedures organized medicine would be demoralized, and in the end totally destroyed.

It is up to you, gentlemen, to decide whether you wish to lose your identity as professional men and become ordinary laborers, or retain your present position in the social order of American life.

DR. STEWART ROBERTS, Atlanta: Please prove the statement that I am a silver-tongued orator.

. . . At this point, President Head ruled that Dr. Mulherin was out of order, because he had already had the allotted time to discuss the paper. . .

DR. MULHERIN: Mr. President, I know I am out of order, and beg pardon for the transgression, but I could not refrain from getting on my feet when Dr. Stewart Roberts was "getting away with murder" before the meeting of this general assembly.

DR. R. L. MILLER, Waynesboro: This is a very important paper of Dr. Wall's, one that strikes at the source of the living of every doctor present. But the crux of the whole matter rests upon one thing and one thing only, and that is that the general practitioner equip himself to adequately diagnose and intelligently and scientifically treat his patients. If he does that, he has won the battle. If he does not do it, he has lost the fight.

He is always the first man that sees these patients, and if he intelligently treats them and uses the proper amount of psychotherapy along with his scientific treatment, he will lose very few patients to the quack, to the osteopath and to the chiropractor.

There is one thing that I especially wish to emphasize; when a patient is referred to a specialist, save surgical cases, the specialist should report to the physician who referred the case his findings with such suggestions as to treatment he may have. Under no circumstances should he request the patient to return to him for further examinations or treatment.

DR. BENJAMIN H. MINCHEW, Waycross: Mr. Chairman and Members of the Medical Association of

Georgia: It seems to me that the problem of the general practitioner, so-called, and the individuals who come under his care, come under two classes: First, the class that can be treated in the home by him, without reference to anybody. The next is the patient that should be referred to somebody for assistance to the general practitioner for the benefit of the patient, and that possibly means hospitalization and group workings.

It seems to me that the latter is the thing that we have heard discussed. I have enjoyed all the discussions. I very much enjoyed Dr. Wall's paper. But I believe we have come nearer to solving that problem in the city in which I live than any place that I know. We have built a county hospital out of county funds. We have made plans by which a physician in each adjoining county, and there are six adjoining our county, is on the staff of our hospital. They have access to that institution. They have access to our staff meetings. They come and treat their patients there. And, more than that, the general practitioners from every section of southeast Georgia have access to our hospital in conference and consultation with members of the staff. And we have gone further than that. We have entered into an agreement with the County Commissioners from each county surrounding ours, that when a charity patient is admitted, the hospital expense will be borne by the county from which the patient comes. That patient is placed under the clinical service of the man in charge of whatever department the patient comes to, without attendance charge. We have a method of investigation of each patient that comes from our own county, and they are placed according to their ability to pay. If they are not able to pay, there is no charge whatever. Our county is appropriating a thousand dollars a month to take care of that deficit.

We are trying to work on a plan of group study, group application, and group results, treating charity cases where charity is merited, and when we find that the patient is able to pay a hospital fee, we let the hospital care for that, and give the hospital the advantage of that, and we do not try to take a big fee from that individual who is able to pay something, but we try to let him go back home and take care of his family as well.

The thing we are trying to do is to answer the problem that confronts the general practitioner, and the surgeon as well, and our problems are akin and alike, and we are trying to meet it on the basis of fair play, and on the same basis that the hero of Ian Maclaren did in *Beside the Bonnie Brier Bush*, in the spirit of healing, dealing with the sick man as he needs to be dealt with, and answer for the problems of the economic world, and the pay is not forgotten. We invite him over during some period of his illness, to study the case with us, and we study it with him. We do not change that doctor's medicine, materially, to give the impression that the patient needs a change, and we keep that patient in touch constantly by cor-

respondence from the doctor's office, by reports from the hospital office to the family physician, and in that way we are taking care of a situation that I feel is a big problem.

DR. J. COX WALL, Eastman: I appreciated the full and "interrupted" discussion of my friends. There seems to be quite a difference of opinion between some of the gentlemen, especially in regard to state control of medicine. It is true that it is agitated in some parts of the country and may some day come to us, but in the meantime my plea to you, gentlemen, is for a higher standard of service to the sick patient. Do not let your office be just a corridor to the specialist, be prepared to give what the laity is now demanding, this will have a great deal to do with lowering the high cost of medical service that you have been seeing so much about. I think the criticism is often justified, not only in regard to the doctor but in hospitalization, the two making it almost prohibitive for the so-called white collar man.

I do not think the cults and the irregulars should worry any one, their calling is not built on a foundation that will stand the rigid test of time.

I thank you.

GEORGIA UROLOGICAL ASSOCIATION

SAVANNAH MEETING

October 26, 1933

Program

The Georgia Urological Association will hold its semi-annual meeting at Hotel DeSoto, Savannah, October 26th.

The scientific program consists of titles of case reports and papers as follows:

"Embryo-Sarcoma of the Left Kidney of a Girl Three Years of Age." Case Report—Dr. S. J. Sinkoe and Dr. Major F. Fowler, Atlanta.

"Hemi-Nephrectomy for Pyonephrosis Involving the Left Side of a Horseshoe Kidney—Case Report"—Dr. S. T. Brown, Dr. W. E. Upchurch and Dr. S. J. Sinkoe, Atlanta.

"A Clinical Consideration of Movable Kidney"—Dr. Louis McDonald Orr, Orlando, Fla.

"Nephroptosis"—Dr. S. T. Brown, Atlanta.

"Congenital Hydronephrosis"—Dr. James Jervey Ravenel, Charleston, S. C., Professor of Urology in the Medical College of the State of South Carolina, Charleston.

"Chronic Prostatitis"—Dr. Harry Y. Righton, Savannah.

"Urinary Tract Infections"—Dr. Montague L. Boyd, Atlanta.

Officers of the Association are: Dr. William Shearouse, Savannah, President; Dr. Walter B. Emery, Atlanta, President-Elect; Dr. Major F. Fowler, Atlanta, Secretary-Treasurer.

PEPTIC ULCER*

A Study of One Hundred Cases

J. C. PATTERSON, M.D.
Cuthbert

This paper is based on the study of approximately 100 cases of peptic ulcer on whom I have kept fairly accurate records. The diagnosis was based on massive hemorrhage, acute rupture of an ulcer or on the clinical diagnosis following a gastric analysis and roentgenographic examination of the gastro-intestinal tract. Peptic ulcer is a common disease and is frequently overlooked in the daily practice of medicine. These 100 cases were found among 4,000 individuals examined, an incidence of 2.5 per cent. Sixteen cases had gastric ulcer and 84 had duodenal ulcer. The ages varied from 14 to 75 years and 85 patients were white while only 15 were colored. There were 64 males and 36 females. Massive hemorrhage occurred in 11 cases while acute rupture of an ulcer occurred in 25 cases.

In the Leeds General Infirmary healed or active ulcers were found in 10 per cent of 4,000 necropsies. According to Sippy ulcers are found in 5 per cent of all necropsies. Sippy thought that less than 2 per cent of ulcers perforate while Patterson reported 7 per cent of ruptured ulcers in his series of cases.

Medical Statistics

Brown made a follow-up study of 1224 peptic ulcer patients, 1130 of whom had been treated medically and 94 surgically. Hemorrhage occurred in 24 per cent of these cases while perforation occurred in 4 per cent. Of those receiving medical treatment 49.5 per cent were classed as cured, 16.7 per cent as satisfactorily improved, 10 per cent as moderately improved while 20 per cent failed to obtain relief.

Blackford and Bowers studied two groups of ulcer patients, one receiving hospital treatment and the other ambulatory treatment. They found almost equally good results as the treatment was effective in about 60 per cent in both groups.

Lynch from the Montreal General Hospital reported 944 cases of ulcer, an incidence of 1.45 per cent of the total admissions. Medical treatment was given to 72 per cent of the cases while 28 per cent were treated surgically. The Lenhartz regimen of medical treatment was followed in 153 cases of gastric and 165 cases of duodenal ulcer with satisfactory results in 65 per cent and 78 per cent respectively. The Sippy regimen was followed in 57 cases of gastric and 137 cases of duodenal ulcer with satisfactory results in 60 per cent and 81 per cent respectively.

Surgical Statistics

Judd, from the Mayo Clinic reported the results of operation for excision of ulcer in 464 patients of whom 369 were traced. The operative mortality was 0.43 per cent. The results were satisfactory in 90 per cent of cases while in 8.1 per cent there was no benefit.

Balfour reported from the Mayo Clinic the results of gastroenterostomy in 500 cases of duodenal ulcer and 100 cases of gastric ulcer. These patients had been followed from 5 to 10 years. The operative mortality was 1.8 per cent with 4.28 per cent of deaths in 5 years. Satisfactory relief of symptoms occurred in 87 per cent of cases. Recurrent ulceration was encountered in 4.07 per cent of cases including gastrojejunal ulceration in 3.36 per cent.

On the other hand Lewishorn working with Berg at the Mount Sinai Hospital, New York, reported the occurrence of gastrojejunal ulcer in 34 per cent of their cases on whom gastroenterostomy had been done. Berg's operative mortality in doing a partial gastrectomy was 6.9 per cent with gastrojejunal ulcers occurring in 1.1 per cent.

Report of Cases Having Massive Hemorrhage

Practically all of these eleven patients were elderly people. None were under fifty years of age and five women. On admission to the hospital most of these patients were extremely weak from loss of blood. It was necessary to give a blood transfusion in some cases. They were all given the Sippy treatment and recovered under this regimen of treatment. However, two years later one patient had another massive hemorrhage from the stomach from which he died before anything could be done. Another patient died fourteen months later from a rupture of the ulcer without being operated on. However, she had broken her diet and had not taken the proper care of herself. One of this group of eleven has had repeated hemor-

*Read before the Fifth District Medical Society, Atlanta, June 29, 1933.

rhages from the stomach while another died of kidney disease three years after his hemorrhage. One case of alkalosis occurred in the group. The remaining seven patients composing this group have apparently been doing nicely.

Cases Having Acute Rupture of Ulcers

In this group twenty-five cases occurred, twenty-one had ruptured duodenal ulcers while four had ruptured gastric ulcers, two occurring in the pylorus. Five of the patients were negroes, 4 men and one woman, while twenty patients were white, 18 men and 2 women. The age varied from 22 to 70 years. Rupture of the ulcer occurred in these patients from 2 to 48 hours before admission to the hospital. One of these patients was a woman who had been treated 14 months before for a massive hemorrhage from the stomach. She was admitted to the hospital in a state of collapse and I thought she had had another hemorrhage. However, she failed to respond to two blood transfusions and died. At necropsy a ruptured ulcer of the pylorus was found. One man on whom a gastroenterostomy had been done at the Roosevelt Hospital in New York for a ruptured duodenal ulcer had a jejunal ulcer.

All of these patients were operated on immediately and a simple closure of the opening was done with a purse string suture reinforced with a Lembert suture. The omentum was tacked over this and drains were left in. All of these patients recovered except two who were almost moribund at the time of operation. One of these was operated on because of the insistence of his family physician and a simple closure of the ulcer with drainage was done. He died in about an hour. The other mortality occurred in a patient in whom the ulcer had ruptured more than 48 hours before operation. He was operated on by my associate Dr. Elliott. In closing a large ruptured duodenal ulcer in one case the lumen of the bowel was encroached upon too much. One week later a gastroenterostomy was done and he is living and well after two years. I believe it is much safer simply to close the opening of the ruptured ulcer and leave in drains than it is to undertake more extensive surgical procedures.

Moynihan says that 90 per cent of ruptures occur in chronic ulcers and could be prevented by adequate treatment. In the group of cases I am presenting not one of the 25 patients received adequate medical treatment. In most cases roentgenographic studies had not been done and ulcer was not suspected before the patients were admitted to the hospital. This emphasizes the fact that physicians are overlooking ulcer in their daily practice.

Other Ulcers

Except for a Horsley pyloroplasty and about 5 gastroenterostomies I have done no surgery on these other ulcer cases. This is for several reasons: (1) The mortality rate in stomach surgery is high and in a small town one cannot afford deaths, (2) stomach surgery unless it does some definite good will do

lots of harm and the operative procedure frequently gives the patient more trouble than the ulcer did, (3) stomach surgery has not been standardized. There are many different operative measures advocated, namely pyloroplasty, gastroenterostomy, partial gastrectomy and the cholecystogastrectomy of Dubose. The ulcer may return after any of these, even after partial gastrectomy in competent hands over 100 cases have been reported of return of the ulcer. Fourth, last and best of all, medical treatment, at least in our hands has been so satisfactory that except in certain complications, such as acute rupture, repeated hemorrhage and failure of response to adequate medical treatment until I do not believe surgery is indicated.

The main idea in treating these cases has been to overcome the hyperacidity and relieve the pylorospasm. They all were put on some form of the Sippy regimen or a modification thereof. Alkaline powders were given for about three weeks and frequent feedings for at least two years.

It is remarkable how some of them, even with considerable stasis, improved. One case in particular illustrates this. This patient was a woman who had considerable barium left in the stomach after 12 hours, had attacks of severe pain and had had one hemorrhage. I insisted on operating on her and she refused. She was put on the regimen of treatment outlined above and steadily improved. I received a letter from her the other day stating that she had been practically well for the past seven years.

A few of these cases have had some return of symptoms, but otherwise have been fairly comfortable. Two were unimproved, but they would not cooperate and would not carry out instructions. Except for these two the others did exceedingly well.

Proper medical treatment should consist of neutralizing the acidity and relieving the pylorospasm. This can frequently be carried out by ambulant treatment; if not the patient should be put to bed for three weeks and his progress checked with the x-ray. Then if they have had proper medical treatment and do not improve or have any of the complications before enumerated I believe they should have some form of surgery, depending upon the location of the ulcer, the condition of the patient and the skill of the surgeon.

Conclusions

1. I have tried to show that peptic ulcer is a fairly common disease and that it is overlooked a great deal as shown by the high percentage of hemorrhages and acute ruptures that occur.

2. A brief review of some medical and surgical statistics is presented for the purpose of comparison.

3. Eleven cases of massive hemorrhage which have done fairly well on medical treatment have been reported.

4. Twenty-five cases of acute rupture where the mortality is below the average which I believe is due to simple closure and drainage rather than more extensive surgery have been reported.

5. Peptic ulcer is primarily a medical condition with surgical complications.

SYPHILIS OF THE NERVOUS SYSTEM

Pathologic and Therapeutic Considerations

RICHARD B. WILSON, M.D.

Atlanta

It is convenient and practical to divide syphilis of the nervous system into two groups which differ fundamentally as to structures involved, type of body reaction evoked and response to therapy. There is the one that involves primarily the meninges and vascular structures, and which may be referred to as mesodermal syphilis; and the other that involves primarily the nervous tissue itself—the brain substance in general paresis, and the spinal cord in tabes dorsalis—and which may be referred to as parenchymatous syphilis.

Syphilis of the meningo-vascular system has been known histologically almost since the development of histo-pathological technique. It is characterized by a chronic type of inflammation involving the meninges and blood vessels. Such parenchymatous involvement as does occur is due to direct encroachment of the inflammatory process in the meninges or blood vessels. That part of the nervous tissue not directly implicated in this infected area remains free of the pathological process. (Fig. 1)

General paresis and tabes dorsalis have been recognized as clinical entities for a long time but only fairly recently was syphilis suspected as an etiological factor. In referring to parenchymatous syphilis Gowers in 1899 wrote: "Among the individual causes, one overshadows all the rest—the influence of syphilis." In 1900 Oppenheim wrote: "Though we are not justified in regarding dementia paralytica as a syphilitic brain dis-

ease or in considering syphilitic infection as a necessary preliminary condition, it is certain that syphilitics are more often attacked than are non-syphilitics." Gradually, with increasing evidence of the causal relationship of syphilis to general paresis the latter came to be regarded as a metasyphilitic disease.

In 1904 Alzheimer and Nissl established the foundation for the histopathology of the nervous system with their classical description of the brain changes in general paresis. Of these changes the most significant are the extensive loss and degeneration of the nerve cells and diffuse perivascular infiltration with lymphocytes and plasma cells. (See Fig. 2) The meninges, although usually infiltrated, do not present the pronounced inflammatory reaction as is encountered in mesodermal syphilis. (Compare with Fig. 1) Another striking histological reaction is the presence of large numbers of so-called rod cells which we now recognize as proliferated microglia. (Fig. 3) Although the presence of these proliferated microglia is not pathognomic of general paresis this degree of proliferation is seldom encountered in other conditions. Undoubtedly the one most important diagnostic feature of general paresis is the presence of large amounts of iron pigment in the perivascular spaces and in the microglia. Thus far this has not been found in other diseases.

After Nogouchi and Moore in 1913 demonstrated spirochaetes in the brain the old conception of general paresis as a metasyphilitic disease was abandoned and parenchymatous syphilis was regarded as a direct syphilitic process dependent upon the local presence of spirochaetes. However the accumulating evidence within the last few years indicates that this newer conception has not fully and adequately explained the whole process. Moreover there is still considerable conjecture as to the mode of invasion and as to why the infection in one case manifests itself in the form of mesodermal syphilis and in another in the form of parenchymatous syphilis and that one type practically never changes to the other.

There is ample evidence that involvement of the nervous system occurs in the early

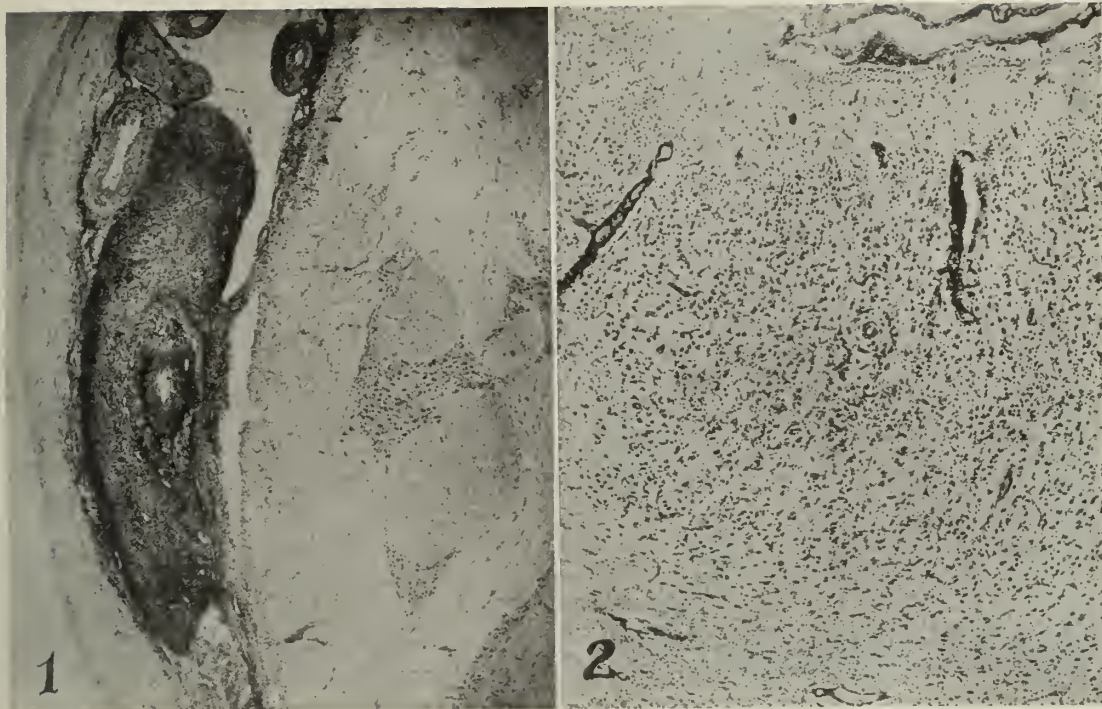


Figure 1. Nissl stain. Meningo-vascular Syphilis. Panarteritis with pronounced meningeal exudate.

Figure 2. Nissl stain. General paresis showing rather typical nerve cell loss and architectural disturbance together with perivascular infiltration. The meningeal infiltration is minimal.

stages of syphilis. In a large number of cases spinal fluid changes have been discovered in as high as 22 per cent of patients with a primary lesion and as high as 35 per cent before the appearance of skin or mucous membrane lesions. Some believe that there are two strains of spirochaetes, one having an affinity for the nervous system and one having an affinity for the skin. Marie and Levaditi claim essential differences between their dermatrophic and neurotrophic strains as to the incubation period, primary lesion and transmissibility. However, their findings lack sufficient confirmation and evidence has been adduced in refutation of their contention. The importance of immune biological factors is suggested by the familial report of Burrow in which of six siblings born of healthy parents, five were infected with syphilis from different sources and all developed tabes dorsalis. It is, however, a notable fact that secondary skin manifestations very seldom occur in patients who later develop general paresis or tabes dorsalis. This lack of secondary skin involvement is held to be of great importance in the development

of parenchymatous syphilis. It is fairly well established that the skin is one of the strongest defense mechanisms of the body both as to cellular reaction and as to the formation of anti-bodies. Thus the failure of the skin manifestations may be the result of inadequate stimulation because of the spirochaetes' low virulence, an organism weakened by specific treatment or possibly an inherent weakness of defense on the part of the body. If this secondary skin reaction fails to occur the spirochaetes already scattered throughout the body proliferate without resistance and later give rise to nervous system manifestations. Nonne even goes so far as to suggest that the incidence of syphilis of the nervous system would be reduced if the patient were not treated with anti-luetic drugs until the secondary skin lesions appear—thus the body would be permitted to develop its strongest defense—anti-luetic treatment would supplement this. Spitzer in reviewing five thousand cases has come to the conclusion that as a result of anti-luetic treatment fewer patients are having secondary syphilis but a greater number are developing syphilis of the

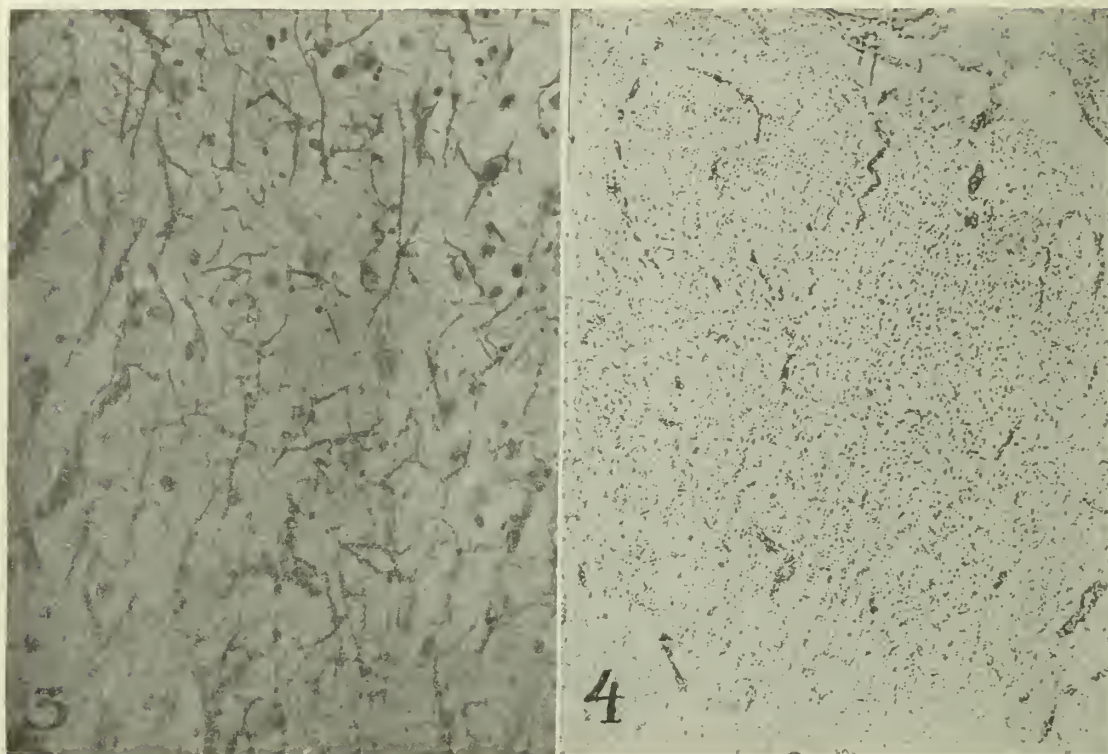


Figure 3. Silver stain. Characteristic appearance of the microglia in general paresis. There is elongation of the nuclei and the protoplasmic processes branch out giving very much the aspect of denuded trees.

Figure 4. Nissl stain. During malarial treatment. Diffuse infiltration such as is commonly found at this stage.

nervous system and that it is appearing earlier.

Spatz believes that invasion of the nervous system occurs first in the sub-arachnoid space; the spirochaetes reaching there by traveling along the lymph channels of the nerves and blood vessels; that in general paresis the infection is blood borne and the spirochaetes enter the brain substance as a result of a break in the blood-cerebrospinal fluid barrier. It seems altogether probable that invasion of the subarachnoid space does occur first but if the brain is infected from another source there is no reason why one should not find concomitantly, parenchymatous syphilis and mesodermal syphilis. It seems far more likely that the invasion of the brain is from the originally infected sub-arachnoid space. Silva and others have presented beautiful photographs of spirochaetes in the perivascular spaces and apparently passing into the brain but I do not believe they have been found in the blood stream. Although the perivascular lymph spaces do communicate with the sub-arachnoid space there does exist

some type of barrier between, as brought out by Key and Retzius who, injecting certain dyes in the sub-arachnoid space, found that they did not penetrate into the perivascular spaces. The flow of the perivascular lymph stream is very likely toward the meninges. In carcinomatosis of the meninges there is practically never any involvement of the brain substance and the perivascular spaces are practically never invaded to any considerable depth. Kubie's work on spinal drainage also suggests this. He finds in experimentally produced infection of the nervous system that if large quantities of fluids are given and the spinal fluid is continuously drained off there is a considerable reduction in the amount of perivascular exudate. It seems that as long as this barrier remains intact the spirochaetes proliferate in the subarachnoid spaces and the condition remains mesodermal syphilis; if they are able to penetrate this barrier they pass along the perivascular space into the brain substance and general paresis develops.

Another factor that is probably of great

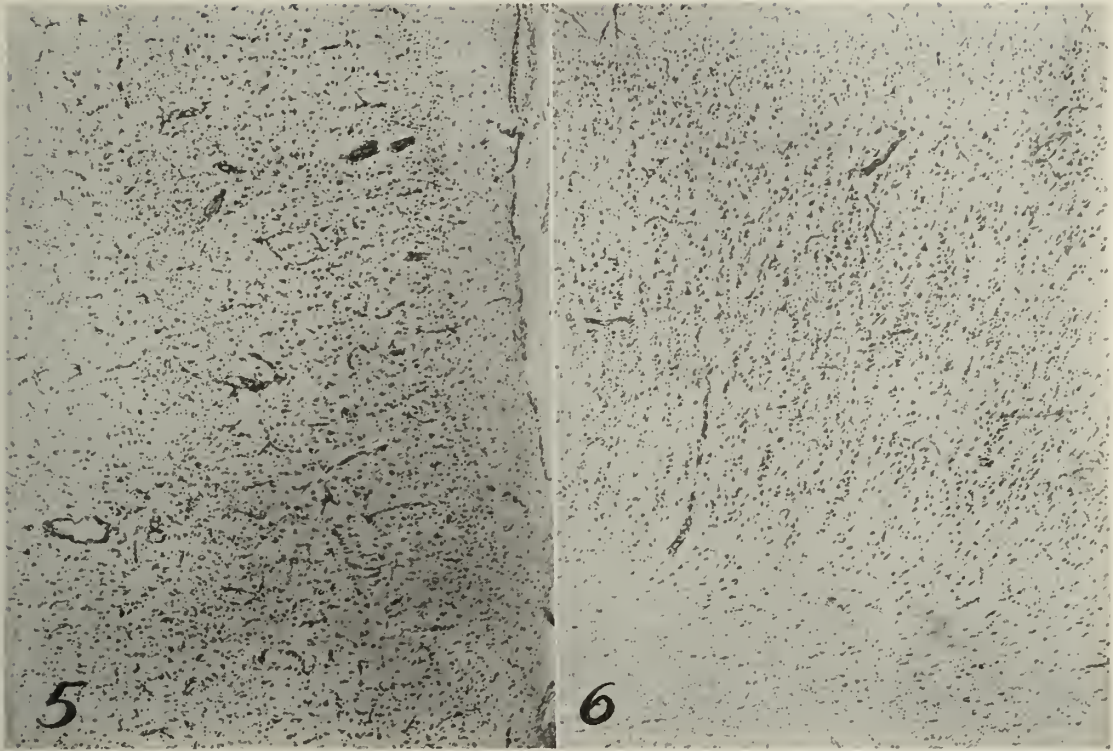


Figure 5. Nissl stain. Seven days after the end of malarial treatment. The inflammatory reaction is a little more intense than during treatment. Compare with Figure 4.

Figure 6. Nissl stain. Three months after treatment. The cortical architecture here presents an improved appearance and there is some diminution of infiltration.

significance is the alteration of the barrier between the blood and the cerebrospinal fluid. Normally this barrier (walls of the blood vessels and the choroid plexus) behaves much as a semi-permeable membrane, permitting the exchange of substances between the two fluids by a process of osmosis, but when injured, permits substances ordinarily held back to pass through. Such is the case in general paresis. An increased passage from the blood to the spinal fluid has been found for certain hemolysins, for uranin and for bromides. The Walter bromide method has proved most satisfactory and has been used most extensively in permeability studies. With improvement following malarial treatment this permeability for bromide decreases; and Malamud has found that in such cases, a subsequent increase usually precedes by several weeks a clinical relapse. Hauptmann even goes so far as to deny significance to the local presence of spirochaetes in the brain and believes that the essential pathogenic factor in general paresis is an injury to this barrier,

probably the endothelium, which permits toxic substances or even substances normally present in the blood to pass through. The increased permeability is an established fact and it seems not improbable that the barrier may be injured by spirochaetes during their passage along the perivascular spaces.

The diagnostic importance in general paresis of perivascular and microglial iron has already been referred to. Spatz who made the most exhaustive studies on brain iron believes it to be of hematogenous origin. The main argument in support of this contention is that it bears no relation to nerve cell destruction and that iron containing microglia are always near rich perivascular deposits. Confirmatory evidence of this has been obtained from a series of five cases studied by me. The series of five is, of course, too small to form a definite conclusion. However only these five cases came to exitus within a month of permeability determination. In all of these there was a direct parallelism between the amount of perivascular

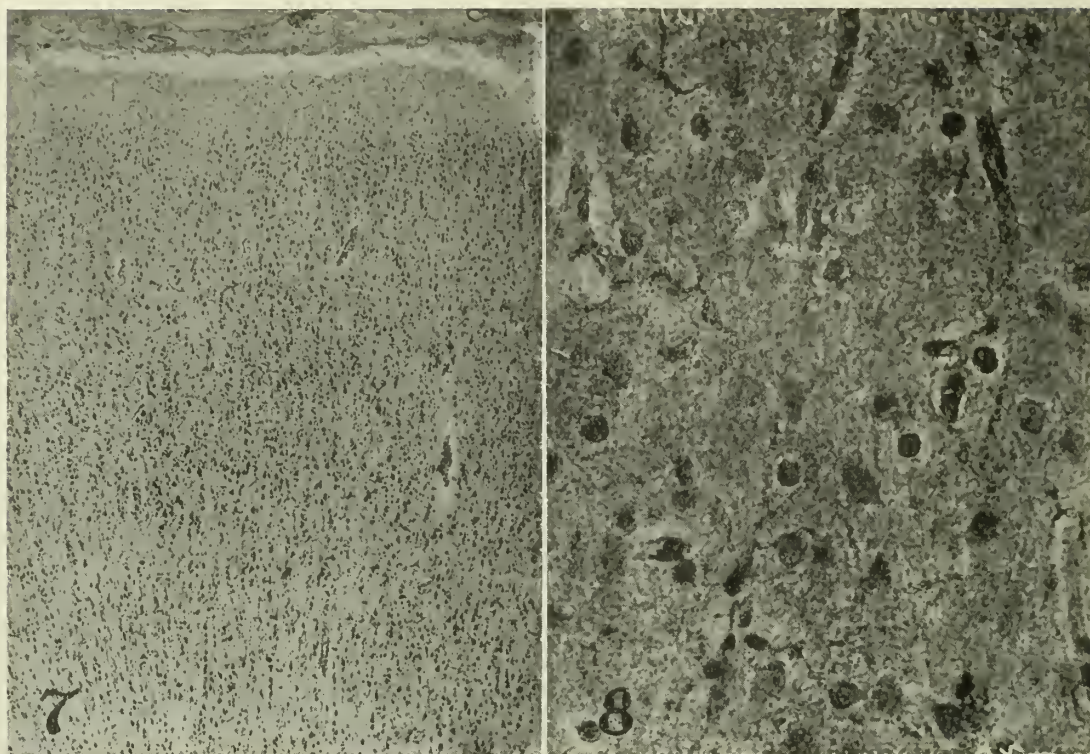


Figure 7. Nissl stain. During remission. The cortical architecture presents a greatly improved appearance and the perivascular infiltration has practically disappeared.

Figure 8. Silver stain. Same brain as Figure 7. A comparison with Figure 3 demonstrates to what extent the microglial reaction may regress.

iron and the degree of permeability for bromide. (See table below)

TABLE 1—COMPARISON OF IRON IN BLOOD VESSELS AND IN MICROGLIA.

	Permeability Index	Blood Vessel Iron	Microglia Iron
Case 1	1.78	3.0	2.0
Case 2	1.85	2.9	2.7
Case 3	2.16	3.8	2.4
Case 4	2.25	1.2	0.6
Case 5	2.42	1.0	1.6

For years Jakob and Spielmeyer have carried on a polemic over the problem of general paresis. Jakob sees in general paresis a malignant type of syphilis in that the condition results from inadequate defense on the part of the body. Spielmeyer violently disagrees and regards the perivascular infiltration as ample evidence of defense. However, if the intensity of the inflammatory reaction be regarded as an indication of the defensive strength, certainly defense in mesodermalsyphilis is by far more powerful than in parenchymatous syphilis. It is certainly true that there is no parallelism between the intensity of the inflammatory reaction in general paresis and

the degree of nerve cell destruction. It is a common experience to find cases in which there is a very profound inflammatory reaction with only slight nerve cell destruction; and on the other hand cases with extensive nerve cell destruction and only a minimal inflammatory reaction. This was recognized decades ago by Nissl and illustrated by his famous case of the man who to all appearances was in perfect health, successful in business and met death through an accident. Histological examination of the brain revealed a very typical and intense inflammatory reaction characteristic of general paresis. The evidence at hand seemed to warrant the conclusion that the inflammatory reaction is to be taken as an indication of the body's defense; and nerve cell destruction as an independent degenerative process, perhaps in some way related to the increase in permeability

Studies of the influence of therapeutic malaria on the histological picture of general paresis may throw some light on the mechan-

ism of this defense. The sole rationale behind malaria and other non-specific measures is that they in some way increase the general defense reaction on the part of the body. These measures have brought about clinical improvement to a degree far in excess of anything that has been produced by specific anti-luetic treatment. Histological studies of the brains of patients dying during and after malarial treatment indicate that during and shortly after treatment there is a perceptible increase in the intensity of the inflammatory process. (Compare Figs. 4, 5, 6, and 7) Figure 4 is from a patient dying during treatment. Figure 5 is from a patient dying seven days after treatment. These are all from a fairly large series and represent about an average of what was found at the various stages. (Compare Figs. 4 and 5) It is seen that from the beginning there is some intensification of the inflammatory process. Figure 6 is from a patient dying three months after treatment and figure 7 is from a patient dying several years after treatment, during a clinical remission, and as a result of an operation. These last two figures show gradual improvement in the histological picture and also (Fig. 7) how far histological improvement may go. Figure 8 is of the microglia from the same brain as the Nissl picture in figure 7. Comparing this with figure 3 it becomes immediately apparent to what extent microglial reaction can regress. It has also been found that there is an increase in perivascular iron and an increased permeability for bromide during treatment.

Of considerable significance is the report of Hoff and Silberstein of a marked increase in the opsonic index of the spinal fluid in malarial treated patients. They find a marked increase in bacteria trophins for streptococci and colon bacilli in the blood and spinal fluid of patients during malarial treatment. They have also found that spirochaetes mixed with leucocytes and cerebrospinal fluid of treated cases produced no lesions when injected in the rabbit's testicle, whereas when mixed with leucocytes and spinal fluid of untreated cases the injection invariably produced gummatous lesions. Out of thirty-eight brains studied by me spiro-

chaetes were not found from the end of the exacerbation of the inflammatory reaction until six months after the end of treatment at which time, as has been pointed out on previous occasions, recrudescence of the process is likely to occur in a number of patients. Others who have searched for spirochaetes have also failed to find them during this period. Another indication of the increased defense reaction on the part of the body by non-specific means is the report of a number of cases in which gummas appeared in the skin and mucous membranes during and shortly after malarial treatment. To my knowledge such findings are otherwise unknown in the course of general paresis. This all seems to indicate that in parenchymatous syphilis there is a weakening of the body defense and that this is enhanced by non-specific measures. In meningo-vascular syphilis where the body is not lacking defensively the usual anti-luetic treatment is generally sufficient to arrest the process. In parenchymatous syphilis the spirochaetes are naturally less accessible to medication and where there is a failure of the defense mechanism little is to be accomplished by such treatment. Non-specific treatment brings about improvement by the mobilization of additional defense units.

Such evidence as is available seems to indicate that in parenchymatous syphilis the usual anti-leutic treatment is likely to be more harmful than beneficial in that it accomplishes very little directly and most important of all seems to have an unfavorable influence on the body's response to subsequent non-specific treatment. There have been several clinical reports that indicate this and in the three cases which I examined histologically after such intensive treatment there was a failure of the usual exacerbation of the inflammatory reaction after malarial treatment. This suggests the great importance of determining the type of syphilis before making a decision as to what method of treatment shall be employed. Of course one occasionally encounters cases where it is almost impossible to decide whether it is primarily parenchymatous or mesodermal syphilis. There is one group particularly in which this is difficult to de-

termine and which has been described so beautifully by Jakob. These are cases which are characterized histologically by endarteritis of the small cortical vessels. Clinically this type of case is most likely to resemble general paresis. Serologically, usually no changes are found. Perivascular infiltration is minimal but there are pronounced endarteritic changes in the cortical vessels. It would seem that the inflammatory process is inactive but the endothelium has been damaged and the tendency is to progressive endarteritis even though there is no active syphilitic process and no spirochaetes can be found. The therapeutic outlook in this type of case is almost hopeless.

Little needs to be said about the method of treatment. Inoculation with tertian malaria appears to be the method of choice, in that it is less dangerous, easier to stop and the reaction is less severe. Where malaria is not available intravenous injections of typhoid vaccine are of value although the reaction to this is generally more severe than to malaria. There seems to be the impression that in the treatment of tabes dorsalis sulphur in oil is somewhat more efficacious than other non-specific measures. It is also claimed that good results have been obtained with diathermy. However, this method has a decided disadvantage in that it requires very expensive equipment, the services of one or two attendants over a period of several hours and the reports indicate that this method is more trying on the patient than others.

Summary and Conclusions

1. Syphilis of the nervous system is divided into mesodermal syphilis in which the meninges and blood vessels are primarily involved and parenchymatous syphilis in which the brain and spinal cord are primarily involved.

2. In the majority of cases there are changes in the spinal fluid during the primary stage and before the appearance of secondary manifestations.

3. Subsequent involvement of the central nervous system in the majority of cases is associated with failure of secondary skin manifestations.

4. The initial infection is of the sub-

arachnoid space. If the infection remains there mesodermal syphilis is the result. If the barrier between the sub-arachnoid and perivascular spaces is broken the spirochaetes pass along the perivascular spaces into the brain and parenchymatous syphilis results.

5. In parenchymatous syphilis the inflammatory reaction is probably to be regarded as an indication of the strength of defense on the part of the body and the nerve cell destruction is an independent process perhaps in some way related to the increase of permeability of the blood-cerebrospinal fluid barrier.

6. Non-specific treatment in parenchymatous syphilis is beneficial as a result of stimulating the body's defense which is manifested by (a) increase of the inflammatory reaction, (b) increase in the opsonic index of the spinal fluid, (c) destruction of spirochaetes.

7. In parenchymatous syphilis pronounced and intensive specific treatment is apt to be more harmful than beneficial in that it has little direct effect and seems to have an unfavorable influence on the body's response to subsequent non-specific treatment.

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CARE OF ADVANCED CACINOMA OF THE GASTRO-INTESTINAL TRACT

Frank C. Yoemans, New York (Journal A. M. A., Oct. 7, 1933), points out that, because of the fact that the great majority of patients with a malignant condition of the gastro-intestinal tract will reach the surgeon in a stage of the disease so advanced, radical excision—the most hopeful type of therapy—is impossible. From the very nature of conditions it would seem that this state will persist and that palliation will consequently continue to be the only form of treatment for patients with carcinoma of the gastro-intestinal tract, for the following reasons: 1. In many instances the malignant process is insidious in onset and almost symptomless until far advanced, or the patient all too frequently neglects early warnings. 2. Failure to make a thorough examination when medical advice is first sought is quite common. There are difficulties in detecting, and it is frequently impossible to detect, early malignant conditions in certain situation by available methods of diagnosis. The author states that the sympathetic attitude is important, as the victim of inoperable cancer may become a prey to the irregular practitioner or cultist. The desideratum is life in comfort while it lasts

SURGERY AS AN AID IN THE TREATMENT OF PULMONARY TUBERCULOSIS*

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Atlanta

As everybody knows the treatment of pulmonary tuberculosis is prolonged rest, both body and mind, sunshine and plenty of fresh air and good food. Under this simple, well-tested plan most patients will be cured if the treatment is begun early and adhered to. Unfortunately in many cases, when the diag-

nerve resection, artificial pneumothorax, extrapleural thoracoplasty or pneumolysis.

When the lung is put at rest, meaning mechanical and functional, the constant fluctuating intrapulmonary pressure incident to lung volume is reduced to the minimum and as a result the washing out into the lymph and blood stream of the toxic products of the tuberculous region is likewise reduced. It is these poisonous products that keep up the fever, cause night sweats, loss of appetite and weight. The deleterious effects of this toxic material will be reduced in proportion to the degree to which the lung is put at rest

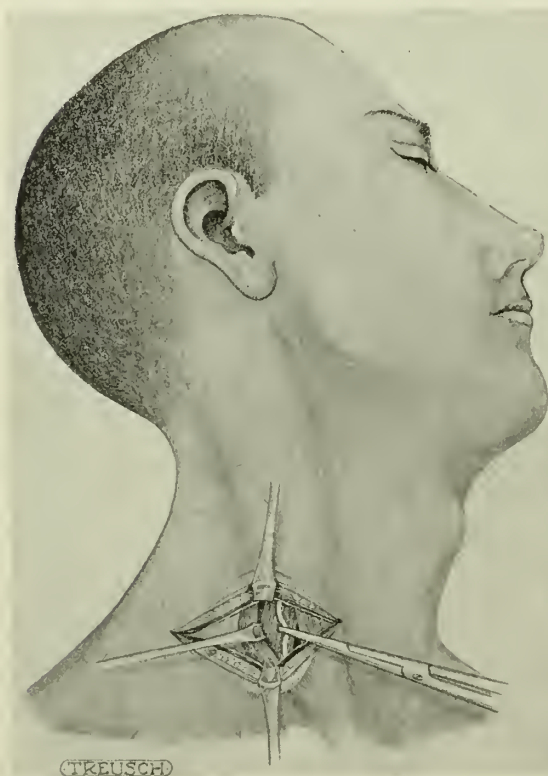


Figure 1. To illustrate location of phrenic nerve on anterior scalene muscle. It may be crushed to give only temporary paralysis if desired.

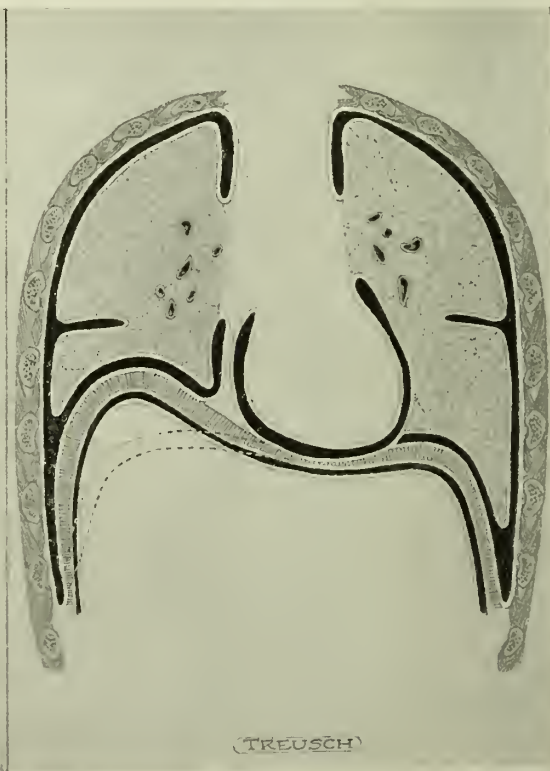


Figure 2. Showing approximate degree of diaphragm elevation. That also depends on number of adhesions. Dotted line illustrates approximate normal position.

nosis is made the disease has become rather extensive or maybe cavities have already formed and possibly hemorrhages have occurred and still others have empyema. It is in such cases, particularly, that nature is aided by partial or complete compression of the lung. This is accomplished by phrenic

provided the patient has some natural resistance.

When a tuberculous lesion heals it does so by the formation of fibrous tissue. This is evident as in nearly all cases of tuberculosis of rather long duration there is shrinkage of chest, limitation of motion on the affected side and downward slant of ribs. Partial or complete pulmonary compression stimulates

*Read at a meeting of the Georgia Tuberculosis Association, Atlanta, May 4, 1933.

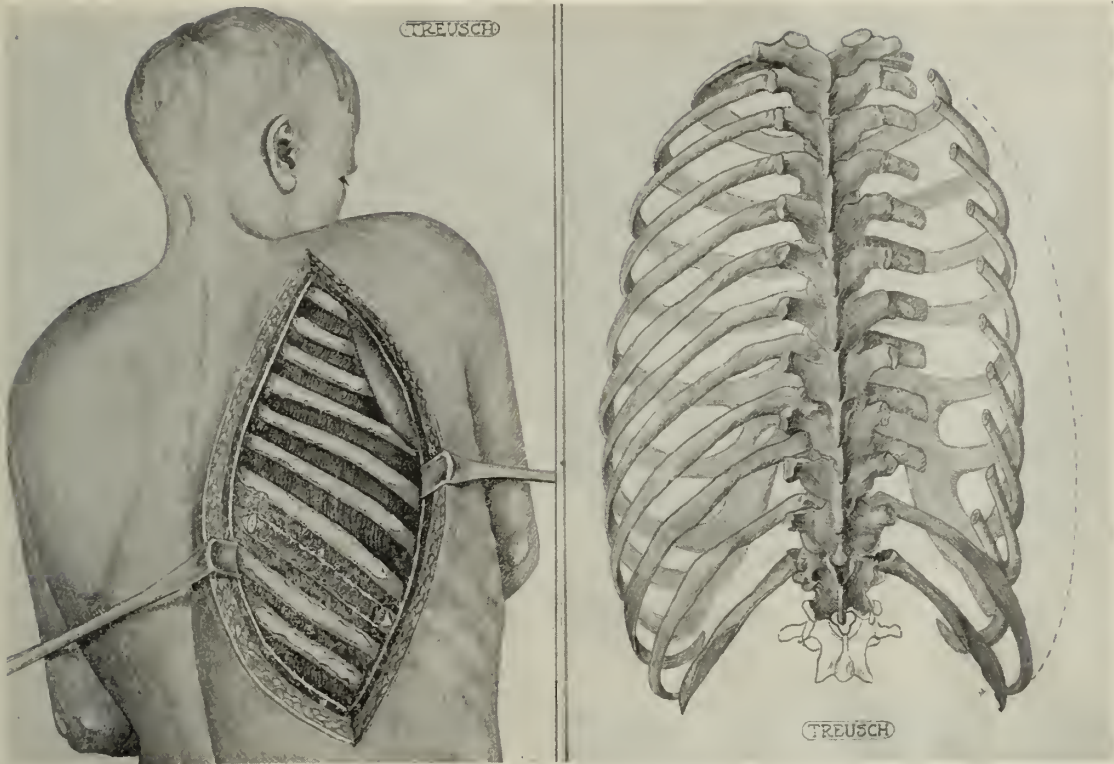


Figure 3. To illustrate rib exposure. Operation is done in two or more stages.

Figure 4. Illustrating degree of chest collapse which depends on time after operation and number of adhesions.



Figure 5. Left sided tuberculosis with multiple cavities and marked fibrous tissue formation. (Case of Dr. Champ Holmes).

Figure 6. One year after phrenicectomy. Note high position of diaphragm.

the formation of fibrous tissue. It has been demonstrated on dogs that if a normal lung is completely collapsed for a prolonged period a generalized fibrosis of that lung occurs. As partial or complete compression encourages

the formation of fibrous tissue and as all fibrous tissue tends to contract it would seem that pulmonary compression would be definitely indicated in cases with cavitation, also in cases of hemorrhage, when the hemor-



Figure 7. Patient shown in figure 3 one year later.

Figure 8. This figure illustrates degree of collapse of chest two months following removal of a good portion of all ribs. (Case of Dr. C. C. Aven).



FIGURE 9.

Right lower involvement with evidence of extensive infiltration. (Case of Dr. G. F. Spearman).

rhage, is not controlled by the usual means, and if the hemorrhage is from an eroded vessel within a cavity, compression serves the double purpose of obliterating the cavity and controlling the hemorrhage and also reduces the danger as a tuberculosis carrier.

Of the means of lung compression, artificial pneumothorax is considered the safest, is temporary, and the degree of compression can be regulated more accurately. This is

usually done by the internist and some of the most rapid results are seen following its use. Its chief value perhaps is during the early stages before the formation of adhesions and at a time when a more or less permanent compression is *not* desired. When artificial pneumothorax is unsuccessful or when a more permanent partial compression is desired, phrenic nerve resection is the least radical means of obtaining same. This gives a degree of collapse corresponding to about 300 to 800 c.c. of air in the pleural cavity and reduces the vital capacity approximately one-third on the affected side. The cough and expectoration are made easier, cavities tend to become obliterated more rapidly by permitting the adhesions to contract.

If a more complete and permanent collapse is desired then the more radical step of extrapleural-thoracoplasty may be done. This implies the removal of a sufficient amount of all the ribs to permit of a complete collapse of the lung. It is a radical step and is indicated in some cases of chronic unilateral fibroid tuberculosis with marked fibrous tissue formation associated with cavitation and resulting in deviation of mediastinum elevation of diaphragm and retraction of ribs and particularly chronic tuberculous empyema. The opposite lung should be free of the disease, or if involved, it should be quiescent.

This operation must be done in stages, the interval between stages to vary so as not to subject the patient to too much shock or too sudden change in the pulmonary pressure. This operation is usually preceded or followed by phrenic nerve resection in order to get a more complete collapse.

There is no condition in which the co-operation between the surgeon and internist is more important than in the cases of pulmonary tuberculosis which might require surgery. The internist should from the history of the case and after study and observation be able to come to some conclusion as to the prognosis. Some individuals have no resistance, will not, or cannot cooperate and their progress is downward. To do surgery indiscriminately for pulmonary tuberculosis will not only not benefit a good many but will add to their discomfort and lend discredit to surgery and discourage the good cases who should have and who can be benefited, possibly cured, by surgery.

The average tuberculous patient is optimistic, is hopeful, and wants to get well. This being true, I feel that if a radical operation gives the patient a reasonable chance of being benefited or cured, he is entitled to it regardless of what effect it might have on our mortality percentage.

ENCEPHALITIS IN ST. LOUIS

J. P. Leake, Washington, D. C. (*Journal A. M. A.*, Sept. 16, 1933), states that during the five weeks from August 7 to September 10, inclusive, there have been reported in St. Louis City and St. Louis County 656 cases of encephalitis. It appears that the epidemic incidence for this area will not exceed a rate of about one case per thousand of population, and the reported extension of the infection to other places has thus far been remarkably slight. The case fatality rate will be about 20 per cent. Only 13 per cent of the cases have occurred among the 25 per cent of the population which is under 15 years of age, and 23 per cent of the patients have been in the age group from 15 to 34 years, which comprises 35 per cent of the total population. The recovery rate in these two age groups has been relatively high, with about half as many deaths in proportion to the number of cases as in the other two age groups. Of the cases 29 per cent have been among the 27 per cent of the population that is from 35 to 54 years old. The age group over 55, comprising only 13 per cent of the population, has had 35 per cent of the cases.

CANCER OF THE LARYNX*

EDWARD S. WRIGHT, M.D.
Atlanta

Cancer of the larynx occurs in approximately 4 per cent of all malignant conditions and is classified according to its location as being intrinsic or extrinsic.

Intrinsic cancer is confined to the vocal cords and adjacent subglottic and supraglottic structures while extrinsic cancer involves the arytenoids, aryepiglottic folds, epiglottis and pharyngeal surface of the cricoid cartilage. The vast majority of cases is intrinsic in origin and most frequently occur on the anterior two-thirds of the vocal cords. When the cancerous process involves the cords it is always unilateral and affects the opposite cord only through direct extension. The cordal type makes its presence known earlier and is more amenable to treatment than cancer in any other internal region of the body. Squamous cell carcinoma constitutes about 98 per cent of the cases of cancer of the larynx and sarcoma the remaining 2 per cent.

It is the unanimous opinion of all laryngologist that early diagnosis and complete surgical removal are essential for the successful treatment of cancer of the larynx. In view of this fact only about one-third of the cases are seen sufficiently early to warrant some form of surgical procedure and afford a good prognosis. Cordal cancer offers the best prognosis when diagnosed early and proper treatment instituted, a cure being obtained in over 80 per cent of cases. The mortality rate of surgical treatment has been remarkably lowered through the proper selection of patients, preoperative care, improved methods of anesthesia, perfection of surgical technic and proper postoperative treatment.

Symptoms

Chronic hoarseness is the most prominent and constant symptom of intrinsic cancer of the larynx. There is generally associated with the hoarseness, which is progressive, a persistent local discomfort. As the disease advances, various degrees of aphonia occur and dyspnea gradually develops. In extrinsic

*Read before the Medical Association of Georgia, Macon, May 11, 1933.

cancer, local discomfort and dysphagia are the early and important symptoms. Pain, hemorrhage, extension to the glands of the neck and emaciation are indications of far advanced cancer and render a hopeless prognosis as far as cure is concerned.

Diagnosis

Cancer of the larynx is more frequent in males and may occur at any age between 18 and 80, though it is most common during the fifth and sixth decade. The physician and specialist should be suspicious of cancer in every patient who has a chronic persistent hoarseness and every means possible should be utilized to arrive at an early and definite diagnosis. Surgical intervention offers the greatest aid in the early stages and so if we are to offer the patient a favorable prognosis, an early diagnosis is imperative.

When laryngeal disease is suspected, a thorough mirror examination of the larynx should be made. It is not always possible to obtain a complete view of the interior of the larynx on the first examination but it should be repeated until all the structures have been clearly seen, including the anterior commissure. Repeated observations should be made until cancer is definitely excluded or other steps at diagnosis deemed advisable.

The appearance of the lesion in advanced cases may be characteristic, a firm, reddish, ulcerative mass which bleeds easily on palpation, being present on one side of the larynx. There is usually complete fixation of the side of the larynx involved. The early lesions vary in character from a localized, reddish thickening of the cord to a more distinct mass which usually has a broad base but which may be pedunculated. When there is complete fixation of the cord, it is due to deep infiltration and the disease is well advanced. Metastasis is imminent, when this stage is reached, though it may not occur until a considerably later date.

Chronic inflammatory lesions of the vocal cords often present a difficult differential problem. These lesions are characterized by a marked hyperplasia and irregularity of the epithelium and may suggest a precancerous condition. Histologic examination of sections obtained by biopsy reveal various degrees of hyperplasia, hyperkeratosis and irregularity of the superficial and deep epithelial layers, and inflammatory reaction of the subepithelial tissue. It is not always possible to predict which of these cases will develop into cancer or which will recover. These cases should be reported as suggestive of malignancy and the laryngologist must determine, after careful consideration of the clin-

ical findings and the report, whether immediate operation or continued observation is advisable. A majority of these cases will recover under vocal rest and local treatment while a few will progress to malignancy. At the earliest sign of ulceration or localized tumor formation, biopsy should be repeated and if the histologic examination shows an increasing tendency toward malignancy, immediate operation should be performed.

Cancer of the larynx must always be differentiated from syphilis and tuberculosis. These three conditions constitute the most common ulcerative lesions of the larynx and a very careful diagnostic study must always be made. A complete physical examination including x-rays of the chest and serologic tests should always be performed and if doubt still exists, a biopsy should be taken.

A positive Wassermann, together with symptoms of syphilis in other regions of the body is usually sufficient to confirm a diagnosis of syphilis of the larynx. Rapid improvement follows appropriate treatment and makes the diagnosis conclusive. If there is no material improvement following treatment, valuable time should not be wasted believing the condition is still syphilitic, because of a positive Wassermann, but a biopsy should be performed which will show the true nature of the disease. It should always be remembered that syphilis and cancer, tuberculosis and cancer, or all three may occur at the same time in a very small percentage of cases, thus rendering the diagnosis more difficult and the prognosis more uncertain.

Tuberculous lesions of the larynx in the presence of pulmonary tuberculosis should offer very little diagnostic difficulty. These lesions are generally confined to the posterior region of the larynx, while cancer generally occurs anteriorly. When ulcerated they present a shallow, irregular appearance, and the surrounding mucous membrane is usually pale in color. If the vocal cords are involved, they have a moth-eaten appearance, especially along the margins. In case tuberculosis of the larynx is suspected and in the absence of pulmonary activity, a biopsy is the only means of determining the exact nature of the disease.

Biopsy

Frequently the only means of arriving at a definite diagnosis is by removing a section from the laryngeal lesion and making a histologic examination. Even in those cases where there is characteristic evidence of cancer, a biopsy is to be preferred before undertaking any form of radical surgery. It was formerly thought that biopsy caused the dis-

semination of the disease, but it has been demonstrated by Clerf, Tucker, Jackson and others that this belief is unfounded and that no deleterious results have been observed from biopsy over a period of years. In order for a biopsy to be of importance, a representative section of tissue must be obtained, including a portion of the base of the lesion and surrounding normal tissue. Correct preparation and examination by an experienced pathologist are essential. Whenever the clinical findings are suspicious of malignancy but the histologic report is negative, another biopsy should be obtained.

By means of direct laryngoscopy, a section of tissue may be removed from any part of the larynx under local anesthesia and without a great deal of discomfort to the patient.

Grading of Carcinoma

Within recent years there has been a growing tendency to classify carcinoma of the larynx as to the grade of malignancy according to Broder's method of classifying other malignant conditions. It has been shown that there is a definite relationship between the type of cell and prognosis. The classification is divided into four grades, depending on the degree of differentiation of the infiltrating epithelium. The studies of Clerf, Thompson and others have shown that carcinoma of the larynx can be differentiated into two extremes. One, the low grade malignant carcinoma which metastasizes very slowly, and in which there is considerable differentiation of the epithelium, and the high grade early metastasizing, anaplastic type, in which the infiltrating epithelium is undifferentiated. The majority of cases come in the large intermediate group, but they have not yet been satisfactorily divided into types two and three. The knowledge which this investigation affords is of considerable scientific interest and value but it is important only when viewed in conjunction with the clinical findings such as the age of the patient, location and duration of the disease, in determining the course of treatment and prognosis.

Metastasis

It is a recognized fact that intrinsic cancer of the larynx and especially the cordal type, is very slow to metastasize, may be present for years and remarkably far advanced, without metastasis to the regional lymph glands of the neck, as in the case presented. Two explanations have been offered, first, that the majority of cases are of a low grade malignancy and, second, that the vocal cords have a poor lymph supply, while other regions of the larynx are abundantly supplied with lymphatics.

Treatment

There is only one treatment of cancer of the larynx that is worthy of consideration and that is complete surgical removal. The type of operation is primarily determined by the location and the extent of the lesion. The degree of malignancy and type of cancer cell must also be considered in every case.

Laryngofissure and laryngectomy are the operations most commonly employed, though in a few cases of extrinsic cancer, the more radical operation of pharyngotomy has been performed. Laryngofissure is the operation of choice for intrinsic cancer of the larynx, if the growth is confined to the anterior two-thirds of either vocal cord or the anterior commissure, and there is no fixation of the cord, subglottic extension or metastasis to the glands of the neck. This operation will cure over 80 per cent of the cases and leaves the patient with a fairly good voice and good prognosis.

In selected cases of intrinsic cancer, where the disease is but advanced sufficiently to involve the laryngeal ventricle and produce a fixation of that side of the larynx but shows no evidence of glandular metastasis, a partial laryngectomy may be performed with excellent results.

Laryngectomy is indicated in the more advanced cases of intrinsic cancer and all cases of extrinsic cancer, where the disease has not advanced to such an extent that it is completely inoperable. This operation should be resorted to whenever there is a recurrence following laryngofissure. For this reason, patients who have had a laryngofissure operation should be kept under constant observation in order to detect any recurrence, as soon as it makes its appearance.

Irradiation should be used following all operations on the larynx for the removal of cancer.

For that unfortunate class of cases where the disease is so far advanced that operation is deemed inadvisable, only palliative treatment can be rendered, by the use of x-ray and radium and tracheotomy when dyspnea is very marked.

Case of Intrinsic Carcinoma of the Larynx

Mr. C., age 63 years, gave a history of hoarseness for three years with some local discomfort in the throat for the past two years. For the last six months almost complete aphonia was present at times and breathing had become noticeably impaired. At the time of examination, the patient was moderately dyspneic and could barely whisper.

Mirror examination of the larynx revealed a rather large red tumor involving the right vocal cord, ven-

tricle and ventricular band and protruding into the lumen of the larynx, almost to the opposite side. The mass was beginning to ulcerate long the posterior medial surface and had extended just to the arytenoid. The vocal cord per se was not visible. The left vocal cord, which just could be seen, was normal in appearance.

Biopsy was preformed and a section of the tumor was removed for examination. The histologic report was squamous cell carcinoma and was classified according to the intermediate group, approximating type 2.

There was no metastasis to the glands of the neck, over the cricothyroid membrane or involvement of the esophagus.

A partial laryngectomy was performed on this patient about January 1, 1933. The technic of laryngofissure was followed but extended to include the removal of the right arytenoid and the right wing of the thyroid cartilage. The wound healed nicely in three weeks and there has been no recurrence up to date.

This case and paper was presented in the form of a motion picture, demonstrating the technic of obtaining a biopsy and of a laryngofissure operation.

Summary

1. Early diagnosis is of paramount importance in any consideration of cancer of the larynx.

2. Biopsy should be obtained in all doubtful cases and is preferred in all characteristic cases as a confirmatory diagnosis.

3. Grading and typing of degree of malignancy is of scientific interest and value but should be used in conjunction with the duration, location and extent of the disease in determining the procedure of treatment.

4. Intrinsic cancer metastasizes slowly and offers the best prognosis when complete surgical removal is performed.

5. Successful treatment limited to complete surgical removal, either by laryngofissure or laryngectomy.

Discussion on Paper of Dr. Edward S. Wright

DR. BENJAMIN H. MINCHEW, Waycross: This operation was done under local anesthesia. It preserved the voice box, removed the growth involved, and gave the man some degree of comfort after recovery, with an appearance that was almost normal.

Some men prefer laryngectomy, possibly because they cannot say definitely that the cancerous growth is limited to the intrinsic area, that it has passed beyond being a unilateral growth, has crossed over and involved the other cord. In that case, of course, total laryngectomy is necessary, because by that time

a certain amount of metastasis has occurred, and an operation removing the growth on one cord would probably not benefit the patient.

Hoarseness is certainly the most important symptom. We are apt not to pay particular attention to the hoarseness; which is to me the most dangerous.

We are prone to treat all cases of hoarseness as laryngitis, of a simple nature. We might get a positive Wassermann and think that we have a syphilitic condition to deal with. We might find a pulmonary condition and consider the laryngitis secondary to pulmonary tuberculosis. As a matter of fact, we may have not only a syphilitic or tuberculous condition but at the same time having a malignant one.

The fine work of the bronchoscopists who are able to do this skillfully and obtain the specimens for biopsy, of course, opens up a new field, and it lessens the danger of a mistake on the part of any of us. And let me say that bronchoscopy is a specialty in itself. There is only one danger I fear, that we are going to overpublicize it and bring it into discredit.

DR. L. MINOR BLACKFORD, Atlanta: A few years ago, a gentlemen from a neighboring town went to see a distinguished artist in laryngeal work who removed a small tumor from the larynx, but apparently neglected biopsy. A week ago last Sunday the man came to Atlanta. He was a friend of the father of one of my medical students. If you had heard him say, in his hoarse, sepulchral voice, "For God's sake, doctor, don't let me strangle to death," you would have been quite sure there are much worse things than laryngectomy. He is now receiving deep x-ray therapy in hope of palliation.

I am glad to know Dr. Wright had a biopsy in this case, because it is the most important thing in the treatment of tumors of the larynx. The biopsy showed a low degree of malignancy, and he was fortunate in getting out such a large tumor successfully. You cannot tell whether a tumor is malignant or not by looking at it; you must have a biopsy.

DR. HUGH M. LOKEY, Atlanta: When you have a patient with a chronic hoarseness, if he has paralysis or paresis of the vocal cords, with thickening of the cords, and hoarseness over a long period of time, then it is time to suspect malignancy. The patient will frequently have an acute sore throat or some cause of this hoarseness, excessive smoking, or breathing of dust, with irritation of the larynx that might forecast a simple laryngitis. But chronic hoarseness should always be suspected.

It has been my misfortune to have two or three cases that have been diagnosed as simple chronic laryngitis, and they have come for future observation and we have found a well-developed malignant condition. So the most important thing to remember, previous to an operation, is safeguarding of the patient who has chronic hoarseness.

DR. B. MCH. CLINE, Atlanta: First, we all want to congratulate Dr. Wright on his well-written paper. I am sure every one of us has enjoyed it.

Especially is it important at this time to bring to the attention of the general practitioner the need of his cooperation in this new specialty of medicine. Heretofore, we have thought of peroral endoscopy only as a means of removing foreign bodies from the air passages and upper alimentary tract. I do not mean to lessen the importance of this, but in addition I want to impress upon the general physician the need of his calling upon the peroral endoscopist often in the diagnosis and treatment of obscure conditions in the upper alimentary and respiratory tracts.

No doubt, you have today many cases that are worrying you with coughs, hoarseness, difficulty in breathing, or maybe difficulty in swallowing. All other means have failed to help you to make a diagnosis. Why not call upon your nearest endoscopist for help? In doing so, you are not only relieving your patient, but you are encouraging the endoscopist to devote more time to his specialty, thereby becoming more proficient.

There is one thing I have tried to bring out before at state meetings, the necessity of organized clinics. Georgia should have at least four, one in Atlanta, one in Macon, one in Savannah, and one in Augusta; and these clinics should be fully equipped in order to meet any emergencies. They should have at least six trained assistants, for this specialty is not a one-man job. It requires three trained assistants to do this work without a general anesthetic. Heretofore, almost all cases have had a general anesthetic. This is objectionable for two reasons: It increases the danger and the expense to the patient. With a properly trained and equipped clinic, every patient can walk into the hospital and be treated and walk out. When this is done, there is no question of doubt that more physicians will be referring their patients for diagnosis and treatment.

DR. CALHOUN MCDUGALL, Atlanta: Early diagnosis and complete extirpation of the growth is necessary for any beneficial results in laryngeal cancer. It is the opinion of most laryngologist that 80 per cent of relative cures can be obtained in early intrinsic cancer of the larynx by the laryngofissure operation. The operation must be limited to this class of cases and diagnosed early.

Unfortunately laryngologist do not see one-third of the intrinsic cancers. The other two-thirds have become extrinsic when we examine them and are usually unoperable. This is generally the fault of the public who do not realize the seriousness of a continuous or intermittent hoarseness. The profession is also to blame for some of these fatalities because they do not insist on the patient having an immediate examination by a competent laryngologist.

Direct laryngoscopy is indicated with every patient with hoarseness if the anterior commissure cannot be seen clearly with a mirror.

Biopsy should be done on all cases that are suggestive of malignancy. This procedure can do no harm to any laryngeal lesion whether it is malignant or not.

Squamous cell carcinoma is now classed in types 1, 2, 3 and 4, according to the malignant activity. The case which you have seen in this picture was a type 2. That is why Dr. Wright and I thought we were safe in doing a laryngofissure operation on him instead of a laryngectomy. The growth was large but confined to one side of the larynx and intrinsic. We follow all of our postoperative cancer cases with deep x-ray therapy.

DR. EDWARD S. WRIGHT, Atlanta (closing): There is one thing that I should like especially to emphasize, and that is obtaining biopsy. Securing a biopsy is the only means by which we can make a definite diagnosis. There are certain cases which clinically seem undoubtedly malignant but we cannot be absolutely positive in all cases, and I think it is advisable always to obtain a biopsy and have a histologic examination before any surgical procedure is undertaken.

We all see cases of chronic laryngitis, some of which cause us considerable worry. These conditions may be simple inflammatory lesions or they may be precancerous. Any case of chronic laryngitis which has existed for six or eight weeks should have a biopsy and histologic examination. Frequently the pathologist will render a report as being precancerous. The lesion may appear to be inflammatory clinically but with a suspicious report another biopsy should be obtained. Possibly a biopsy did not show the real nature of the tumor. In order for this procedure to be of importance the section must be removed not only from the growth, but also from the base of the lesion and a portion of the surrounding normal tissue.

There has been considerable discussion as to whether biopsy should be obtained through direct or indirect examination. Personally, I am in favor of the direct method and I believe one can obtain a more complete view of the larynx and a more representative section of tissue.

By reviewing the extensive literature on tularemia, James R. Gudger, Detroit (*Journal A. M. A.*, Oct. 7, 1933), found two cases of tularemic pneumonia, details of an additional case of tularemic pneumonia in one of which the patient recovered. He gives the details of an additional case of tularemic pneumonia that terminated fatally. The principal features were a severe generalized infection, with the greatest degree of involvement in the lungs; without lymphatic enlargement. The condition was diagnosed by serum agglutination, the course of which lasted thirty-one days. The exact route by which the infection reached the lungs, whether through the blood stream, lymphatic channels, or the respiratory passages, is unknown. In the terminal stage the infection was generalized, and there was clinical evidence of extreme toxicity. Lesions characteristic of those produced by tularemia were present in the lungs and peribronchial lymph nodes.

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Devoted to Welfare of Medical Association of Georgia

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ADVICE AND EXAMINATIONS

"Form the habit of thoroughly examining every person who applies to you for assistance." This sage counsel was offered to the writer during his internship by one of the ablest clinicians of this generation. While not always observed, this excellent advice has been constantly in mind and has served as a reminder that the purpose of the physician is to alleviate pain and suffering, and to restore the diseased to health, and that to be most effective in the achievement of these ends a knowledge of the nature of the malady present in any given instance is most essential.

This, of course, involves the expenditure of effort and the employment of laboratory and scientific equipment—depending upon the type and degree of pathological disturbance under consideration. In many cases it is not practicable, or even desirable, to subject one to any considerable array of examinations, the more common-place procedures being sufficient for the practical evaluation of symptoms in the average investigation. In hospital practice examinations are conducted more or less routinely, with consequent improved service resulting. Even in institutional administration, however, it appears that greater laxity exists in this than would ordinarily be expected. Whether this has arisen because excessive emphasis has been accorded scientific procedures, at the expense of adequate training in the development of the special senses, is not entirely clear. At any rate, it is undoubtedly true that less reliance is conferred on individual acumen in the matter of determining the cause of illness than the requirements of the situation warrant.

Medicine has progressed remarkably in the past several decades, as will be readily admitted. It must not be lost to sight of, though, that the people have progressed likewise, and are demanding more of their medical advisers. There was a time when the information deduced from the mere inspection of the togune, together with feeling the pulse, was consid-

ered ample evidence for the diagnosis of "malaria," or, that other superficial make-shifts would be the basis for assuming the existence of "billiousness," or even "torpid liver." Naturally, practice of this kind is ridiculous and should be viewed with the utmost contempt.

There is popular belief—doubtless shared by many physicians—that the great clinics are conducted along lines somewhat miraculous in nature. This impression, of course, is absurd, as everyone realizes who has visited these institutions or who has even considered them. The personnels are composed of competent men, to be sure, but they are not super-men. Success has attended their efforts because they have been systematic and thorough in the investigation of each and every person who has sought their assistance. Co-operation between all concerned is the secret of their effectiveness. As Kipling remarked in his war-time verses:

"It ain't the individual soldier
Nor the army as a whole,
But the everlastin' team-work
Of every bloomin' soul."

S. J. LEWIS, M.D.

The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.

R. I. P.

Last January the *Journal* inaugurated a Department of Clinical Case Reports. The two medical schools of the state, it was hoped, would supply many of these reports from their abundant material, and the staffs of other hospitals were invited to contribute. It was the Editor's ambition that the series would rival the famous clinico-pathologic cases of Cabot of the Massachusetts General Hospital.

After four cases were published, it became apparent that the Editors would either have to write the reports themselves or discontinue the series. It has seemed to them wise to adopt the latter course.

Next annual session of the Association will be held at Augusta, May 8, 9, 10, 11, 1934. Dr. Geo. A. Traylor has been appointed General Chairman; Dr. Jno. W. Brittingham, Chairman of the scientific exhibit.

TAKING STOCK

No practicing physician denies the fact that this nation is just now beginning to recover from one of the most disastrous financial depressions that time has ever recorded. Perhaps no one is in better position to really know the full extent of the horrors than the average doctor. The Federal Government, states, counties and municipalities contribute to many forms of relief, such as food, clothing, fuel, drugs and in some cases hospital care, but the millions who have had to seek medical care had no other alternative than to call on the physicians of the country.

With justice to our profession, I believe I can say that the response was universal in scope, efficient in service, patriotic, loyal and humanitarian in character and with little thought of any financial return. Very few worthy cases among the strictly unemployed were ever denied help by any physician. The depression with all of its horrors increased the work of the doctor among the unemployed, brought about by lack of food, clothing and other real necessities of life.

In our ranks as medical men there are thousands who have lost their homes, some even have had to sacrifice their cars and left with no means of transportation except when a patient would send for the doctor.

Recently, one automobile salesman in my city sold fourteen used cars in one day. These were deals made to those who have been numbered among the unemployed until recently. They accepted everything from meat and bread for the home to the service of the doctor and the first use of their money after regaining employment was to buy a car and begin burning gasoline and seeing the country. Many of these used car buyers had established credit prior to the depression and had the highest regard for every obligation. It seems that the bountiful charity which was extended to them during the era of unemployment was responsible for making many of them feel that all the agencies of the government and society owe them a living and that they do not intend to pay for anything they can get otherwise.

There are two main dangers which are

very likely to follow in the paths of the depression. First, we are liable to make thousands of paupers of folks who formerly were some of the most dependable citizens. Second, we are apt to forget that the price of every commodity is going higher every week and that we cannot continue to do free work with the same ease that we could when the living cost was at rock bottom. I have seen many instances since the wheels of industry have begun to turn where people who were amply able to pay for the services of a doctor would first attempt to secure the services of the city or county physician and if such failed would dig up the cash and call some other doctor. I remember one case recently where a man was using the city physician because he got his services free. The case became very serious and he was not able to locate the city physician, so he called me to his home with the assurance that he had the cash. After making the call he went with me by the bank and drew out cash from his bank account to pay the bill. I remember another case where members of a family who were worth at least fifty thousand dollars were trying to get one of the family in the hospital on a church bed, so that the surgical and medical services would be free.

If we do not care to greatly increase the paupers of our country and at the same time pauperize ourselves for dependency during our inactive years, we should right-about-face and take stock now and make it a rule to investigate every case before considering it one of charity. Our profession has always considered it a duty and a privilege to care for those who are physically or mentally unfortunate in life and we are still willing to give such the very same attention we do our pay patients, but it is not our duty and it is not justice to ourselves or to those we serve to render professional services without charge to families of husky able-bodied men who pay to ride around in either new or used cars, and ride the doctor free. We should stand together in this period of recovery and make those whom we serve conserve their own self respect as well as manifest a proper appreciation for our services to them.

Rome.

M. M. McCORD, M.D.

DRASTIC CUT IN FINANCES FORCES STATE BOARD OF HEALTH TO CURTAIL ACTIVITIES

Dr. T. F. Abercrombie, State Commissioner of Health, today announced a curtailment of all activities of the State Department of Public Health on account of a drastic cut made in the state health budget for the last quarter of this year ending December 31.

Sixteen employees of this department have been advised that it will be necessary to discontinue their services for the months of November and December. The releasing of these employees will cause the department to be greatly handicapped in carrying on many of the essential activities necessary for the protection of the health of the citizens of this state. The releasing of these employees will also cause the greater part of the field work which has been established in recent years to be abandoned. Every division of the Health Department has been required to release some members of their personnel.

As the demands upon the Division of Laboratories during recent years have been so great that the personnel was not able to keep up with the amount of work demanded of them, the loss of some of the personnel in this division will necessitate the department's making a complete change in the policies that they have adhered to in the past. With the exception of the handling of the specimens for the diagnosis of the common communicable diseases, which include typhoid, diphtheria, malaria and intestinal parasites, it will probably be necessary to charge a small fee for all laboratory examinations.

The Division of Vital Statistics has been compelled to release practically one-half of their personnel and this work which deals with the filing and recording of the birth and death records of the state will be seriously handicapped. A great deal of information which has been available in the past cannot be furnished by this division.

The Division of Sanitary Engineering will be forced to release all field engineers and if some plan is not worked out to continue the service of sanitary engineering in the malarial sections especially, this work will suffer a severe handicap. With more than forty cities already requesting financial assistance from the United States Government for municipal improvements, a curtailment of the engineering division will cause a delay in the approval of the plans for the improvement of the water and sewerage systems.

The Supervisor of Mouth Hygiene will also be released and all dental health work will be at a standstill during these two months.

The Division of Child Hygiene will release all of its field nurses who have been devoting their entire time to improving health conditions for the mothers and babies in the state.

The distribution of pamphlets and bulletins on various phases of public health work will have to be discontinued as practically all of this material has been exhausted.

The supplies of biologicals by the department can no longer be made as in the past. The full price for toxoid will have to be obtained for all bottles ordered. In the past the State Department of Health has been paying a part of the price on each bottle of toxoid supplied. Free supplies of antitoxin will have to be curtailed as in the past this has been abused to a great extent by antitoxin being supplied to many individuals who were financially able to have purchased it.

Doctor Abercrombie regrets very much the necessity of the curtailment of any work in this department for these two months and hopes that it will be possible to resume the usual activities on January 1. He requests every physician in the state to cooperate with the Department in every way possible during these trying times and assures the medical profession of his cooperation. He hopes that in the near future the Department of Health will be able to resume its normal activities and be in position to offer the profession and the citizens of the state every assistance possible in improving health conditions in the state.

CAUTION

If you expect the state to continue supplying you with antitoxin, you must comply rigidly with the following rules.

1. Use state antitoxin only for strictly charity patients.
2. If you must use antitoxin for pay patients, collect in advance the price stamped on the package and remit at once to the State Board of Health.
3. Use immunizing antitoxin (1,000 unit package) only for small children who have been intimately exposed.
4. If you furnish antitoxin to other physicians, see to it that it is to be properly used for charity patients, or collect from the physician in advance.

The State Board of Health is facing the most serious financial crisis in its history and, unless relief is obtained in some way, funds available for the purchase of antitoxin will be exhausted long before the end of the year.

We must have your cooperation.

If we do not send as much as you order, I am sure you will understand why.

STATE BOARD OF HEALTH.

SOUTHERN MEDICAL ASSOCIATION RICHMOND MEETING

With every prospect of a banner meeting, the Southern Medical Association moves on to Richmond for its next annual convention, beginning on the 14th and extending through the 17th of November.

Probably at no time in the history of the nation has solidarity of effort and thorough accord of spirit been more necessary than at this moment when the clouds of the devastating depression seem to be breaking. The physicians of the South, always alert to opportunities and obligations, can "do our part" just now in no more effective way than by bringing to one another the stimulus that flows from the companionship, from the broadening of ideas, from the actual dissemination of new thought that always mark the sessions of this great organization.

It seems fitting that this girding of the medical forces of the South for the New Day that is dawning should occur in the capital of the Old Dominion, the focal point of so many stirring events in the history of the United States. Today a metropolitan area of wide dimensions and a medical center of real note, Richmond, of a yesterday that reaches back to the dawn of English occupancy of this continent, is filled with memorials of great names and greater deeds that, along with its natural beauties, lend it a lure, a charm equaled by few other American cities. To these physical and historic embellishments it adds a warmth of hospitality that assures a genuine and winning welcome to our Association.

In behalf of the profession in this city as expressed by your host, the Richmond Academy of Medicine, we extend to the physicians of the South cordial greetings and expression of our earnest desire to have you with us during these notable sessions. General and sectional programs have been admirably arranged and the clinics and scientific exhibits will offer demonstrations of lively interest. Local committees will spare no effort to contribute to the comfort and convenience of the delegates and such guests as may accompany them. The social diversions offered by the city will be very engaging and the points of interest here and in the surrounding territory will lead you into many delightful byways. Let us hope, then, to see you among this great host. It will be our pleasure to solve your problems of transportation, of hotel reservations, or of anything else that may be bothering you. If you have established no other contacts, the undersigned will be very gratified indeed to receive your communication and direct it into the proper channel for immediate action.

JOSEPH F. GEISINGER, M.D.
Chairman, Publicity Committee.

Stuart Circle Hospital,
Richmond, Va.

Rules and Regulations No. 7 of the Federal Emergency Relief Administration are being mailed to all officers of county societies.

POLYCLINIC PROGRAM

The following special program was given at The New York Polyclinic Medical School and Hospital.

In Honor of Visiting Brazilian Physicians

Wednesday, September 27th, 1933

9:00 to 10:00—*Surgical Amphitheatre*

9:00—Dr. Julius J. Valentine, "Curaciones Aparentes de Papiloma Carcinomatosa en La Vegiga."

9:20—Dr. Robert Emery Brennan, "Inguinal Herniotomy Local Anesthesia."

10:00 to 11:00—*Minor Surgery*

10:00—Dr. Frederick M. Allen, "General Use of Insulin."

10:30—Dr. James S. Edlin, "Insulin in Tuberculosis."

10:45—Dr. John Carroll, "Clinical Features in Infarction of the Heart."

11:00 to 11:30—*Surgical Amphitheatre*

11:00—Dr. J. Prescott Grant, "Cholecystectomy."

11:30 to 11:45—*Minor Surgery*

11:30—Dr. Lee M. Hurd, "Lantern Slide Demonstration of Disease of Nasal Accessory Sinuses."

Dissecting Room

11:45—Dr. Frederick C. Keller, "Demonstration of the Technic of Alcohol Injections for Trifacial Neuralgia."

12:15—Inspection of Hospital.

12:45—Buffet Luncheon in Chinese Lounge.

1:45—Adjournment.

JEROME M. LYNCH, M.D.,

President of the Faculty.

EDWARD L. KELLOGG, M.D.,

Chairman, Program Committee.

The following special lectures will be given at The New York Polyclinic Medical School and Hospital.

During the Session of 1933-1934

SCHEDULE OF LECTURES

By RUSSELL L. CECIL, M.D.

Professor of Internal Medicine, N. Y. Polyclinic Medical School and Hospital

Wednesdays, at 2:30 P.M.

Medical Amphitheatre, Second Floor

October 18, 1933—Encephalitis.

November 15, 1933—Typhoid.

December 13, 1933—Infectious Endocarditis.

January 17, 1934—Influenza and the Common Cold.

February 14, 1934—Lobar Pneumonia.

March 14, 1934—Rheumatic Fever.

April 18, 1934—Arthritis.

GEORGIA DEPARTMENT OF PUBLIC HEALTH

T. F. ABERCROMBIE, M.D., *Director*

WATER, SEWAGE AND TYPHOID

Throughout the year and especially during the summer months the State Board of Health receives many letters, of which the following is typical.

"We have several cases of typhoid at our home. Please advise how we can send in a sample of our well water to be tested for typhoid."

These letters serve to emphasize at least four significant facts.

1. A high incidence of typhoid is still prevalent.

2. The larger portion of this occurs throughout the summer months.

3. There is a popular belief, in the lay mind at least, that a bacteriological examination of a sample of water will disclose immediately whether it contains *B. typhosus*.

4. The layman again thinks that water is the principal vehicle transmitting typhoid.

The first two items will not be discussed, suffice to say they are very well known and are verified by morbidity and mortality reports, as shown in the following table.

Typhoid deaths, by months, occurring in Georgia for the years 1930, 1931 and 1932. Also the number of cases reported for 1932.

	Deaths			Cases Reported
	1930	1931	1932	1932
January	5	7	17	72
February	10	11	25	71
March	13	16	33	78
April	13	12	14	82
May	26	11	19	102
June	56	63	46	151
July	93	84	58	410
August	84	88	55	328
September	80	82	49	282
October	58	63	36	131
November	40	43	17	66
December	22	33	4	26

Water Bacteriology

The third item brings up the subject of water bacteriology. The common water-borne diseases are those affecting the intestinal tract, the organisms of which are discharged along with fecal and urinary wastes.

Unfortunately, there are no practical laboratory methods whereby pathogenic organisms can, of a certainty, be recovered from water in which they may be contained even in relatively high densities. It is true that

in some instances attempts to isolate such pathogens as *B. typhosus* have resulted in positive findings, but these cases have been so rare that for routine work such attempts are impractical. On the other hand, if sufficiently delicate tests were available to determine the presence of small numbers of pathogenic organisms in water, such tests alone would be of little value for preventive measures, particularly in the control of public water supplies, for by the time the tests could be completed some of the water would have reached the consumers.

The most practical tests to apply therefore are those which will indicate if it is possible for human wastes to enter the water. The standard American practice in testing water for domestic use consists in the isolation of members of the *Colon-Aerogenes* group with special emphasis being placed upon the presence of *B. Coli*. This organism serves very well as an index of fecal pollution as it is present in large numbers in the excrement of higher animals; it is easily recovered from water by simple laboratory methods; and its presence in water often enables protective measures to be taken before pathogenic organisms may be contributed to the water supply.

The bacteriological standards by which the quality of a water is usually judged are those promulgated by the U. S. Treasury Department and which read in part as follows:

"Of all the standard (10 cubic centimeter) portions examined . . . not more than 10 per cent shall show the presence of organisms of the *B. coli* group."

Some waters, no doubt, may fail to meet the above standards for purity with little or no probability of their containing pathogenic organisms. Such might be the case where the contaminating material might be of animal other than human origin and while even very limited amounts of such matter would be undesirable from an aesthetic viewpoint there is little likelihood that humans would be affected by the use of such water.

In other cases, many samples from a given supply may be negative for *B. coli*, but, due to the fact that intermittent contamination is possible, the water may be potentially dangerous.

Importance of a Sanitary Survey

From what has been said, one readily sees that it is difficult to accurately judge the

quality of a water from a single or even several bacteriological examinations. To arrive at anything like an accurate conclusion the laboratory findings must be supplemented by an intelligent sanitary survey. Often such a survey provides a much more accurate picture of the true condition of the water than does a limited number of bacteriological tests. On the other hand, bacteriological tests are invaluable in confirming the opinions formed from sanitary surveys, and in controlling purification processes of public water supplies.

In the case of private water supplies very often all that one wishes to know may be obtained from a careful inspection of the premises by an intelligent person. The question to be decided is this: Is it possible for human fecal matter or urine, or anything which may have been in contact with these human wastes, to get into the water?

Where the supply is from a well or a spring such contamination may occur by underground seepage from a privy, cesspool, septic tank, or leaky sewer line; by surface wash entering at or near the ground surface; by tracking filth onto a leaky floor or platform over the water; and by dipping vessels directly into the water or by handling a rope and bucket with dirty hands.

Experience indicates that underground seepage from privies, etc., is improbable if the privy is at least 100 feet from, and at a lower elevation than the well or spring although this distance may not be safe in very porous soils and in stratified geological formations.

Georgia Water Supplies

The population of Georgia numbers roughly 2,902,500. Of this number approximately 1,127,000 urban population are served by some 290 public water supplies, while the remaining 1,775,500 rural population depend upon individual private supplies, the greater majority of which are dug wells.

The public supplies vary in nature from plants of modern design skillfully and scientifically operated to plants which are woefully antiquated in design, dilapidated physically, and ignorantly and incompetently operated. However, even in these latter instances some thought has been given to the production of a safe water and that which is delivered is usually of a better quality than that obtained from the average open top, rope and bucket well.

There is a state-wide need for general improvements to both public and private water supplies. Both types have been responsible

for the transmission of typhoid in the past and no doubt will continue to cause more in the future.

The State Health Department has regulations requiring that plans for all public water supplies be approved by its engineering division before the new water plants are constructed. The engineering division makes periodic inspections of all public water supplies and the laboratory makes bacteriological examinations, at least monthly, on samples from most of them. Also the personnel of the engineering division spends considerable time in instructing the operators of various purification plants in the proper methods of operation.

These things are resulting in a gradual, although somewhat slow, improvement of conditions among the public water supplies.

Obviously, however, with its limited personnel the State Health Department cannot extend this advisory supervision to the estimated 350,000 private water supplies in the state, therefore much of the work of improving these conditions must fall upon the local health officers and the practicing physicians.

Laboratory examinations over a number of years indicate that probably over ninety per cent of the private supplies of the state will not meet the bacteriological standards of purity quoted above. The largest single factor affecting the quality of these supplies is faulty construction, allowing contamination to enter at or near the ground surface. Most country wells and springs can be made safe by constructing them in such a manner that nothing can enter from the top. This includes installing a pump in a well or an overflow pipe in a spring so that dirty hands do not have to contact anything entering the water.

Sewage Disposal

It was stated that the average layman considers water the principal medium for the transmission of typhoid. Too frequently the water is blamed and no further investigation made. While it cannot be definitely proven in all instances, evidence indicates that many of the scattered cases of typhoid are due to things other than water. Milk and food products contaminated by carriers are ever present possibilities about which much has been written in the past few years. This is a most important phase, but as it is digressing from the subject at hand, a discussion will not be given here.

The evidence accumulated seems to indicate that in Georgia the most common mode of transmission of typhoid is the house fly. Again referring to the preceding table it is

seen that of all the cases reported in 1932 77 per cent occurred from May through October. These are the months during which flies are most numerous.

Flies by nature breed in filth and transmit this to anything with which they come in contact. The open-back insanitary privy so common in the state affords a most admirable breeding place for flies and as these privies are usually near the houses large numbers of flies soon find their way into the kitchens and onto the foodstuffs. One typhoid carrier in a neighborhood may in this way be responsible for many cases of typhoid over an extended period of time.

Unfortunately this condition affects a very large per cent of the people of the state. A recent survey showed that only 137 municipalities have any form of sewerage systems and in only two or three instances are these used by 100 per cent of the population. A number of towns and cities in the state have sewers available for use by most of their citizens, yet these towns have never enforced connections to be made, with the result that over half of the citizenry are still using insanitary privies. This means that few if any homes in these communities are protected from fly-borne typhoid. The fly does not recognize property lines and although some families may have sanitary privies or sewers there is always the chance of flies from neighboring insanitary privies. Such towns could and should improve conditions by enforcing sewer connections, extending sewers, and requiring sanitary privies in all homes for which city sewers are not accessible.

More than half the population of the state, however, are found in the small unsewered communities and in the country. No definite figures are available but it is safe to state that at least 95 per cent of this class use insanitary type privies.

Several states have adopted privy laws requiring sanitary privies in all homes within fly flight of any other home. North Carolina and Alabama are among the states in the South having such laws.

Georgia laws pertaining to sewage and sewage disposal are most inadequate. The State Health Department has regulations covering certain phases of this subject but direct legislation is needed. The Department encourages and helps promote the installation of municipal sewer systems and sanitary privies but here again much of the work of improving conditions must be left to local authorities. Until more sanitary means of sewage disposal are generally adopted, especially in the more thickly populated communities, the

typhoid death rate will not be materially reduced.

Summary

Most of the typhoid in the state occurs during the summer months. The water supplies of the state cause some of this and are oftentimes blamed for more than they really cause. However, many of the water supplies of the state need improving.

It is thought that the high incidence during the summer months is fly-borne from the insanitary privies which are prevalent throughout the entire state with the exception of a very few cities and towns.

ARTICLES ACCEPTED

To the Editor:

In addition to the articles enumerated in our letter of August 31st the following have been accepted:

Abbott Laboratories:

Abbott's Haliver Oil, Plain

Chloriodized Rapeseed Oil

Ampules Campidol Emulsion, 20 cc.

Gilliland Laboratories:

Staphylococcus Vaccine (Albus and Aureus)

5 cc. vial

Adolphe Hurst & Co.

Metaphyllin

Ampules Solution Metaphyllin, 0.24 Gm., 10 cc.

Ampules Solution Metaphyllin, 0.48 Gm., 2 cc.

Suppositories Metaphyllin, 0.36 Gm.

Tablets Metaphyllin, 0.1 Gm.

Lederle Laboratories, Inc.:

Fish Glue Allergenic Extract (Lederle)

Mead Johnson & Co.:

Mead's Halibut Liver Oil

Mead's Halibut Liver Oil with Viosterol 250 D.

Parke, Davis & Co.:

Parke-Davis Haliver Oil, Plain

Petrolagar Laboratories:

Petrolagar (with Cascara, Non-Bitter)

Pharmedic Corporation:

Aminophylline-Pharmedic

Ampules Solution Aminophylline-Pharmedic, 0.24 Gm., 10 cc.

Ampules Solution Aminophylline-Pharmedic, 0.48 Gm., 2 cc.

Suppositories Aminophylline-Pharmedic, 0.36 Gm.

Tablets Aminophylline-Pharmedic, 0.1 Gm.

Radium Chemical Co.:

Radium Chloride-Radium Belge

G. D. Searle & Co.:

Aminophylline-Searle

Ampules Solution Aminophylline-Searle.

Yours sincerely,

PAUL NICHOLAS LEECH, *Secretary,
Council on Pharmacy and Chemistry,
American Medical Association.*

Chicago, Ill., Oct. 4, 1933.

WOMAN'S AUXILIARY OFFICERS

President—Mrs. J. Bonar White, Atlanta.
 President-Elect—Mrs. J. E. Penland, Waycross.
 First Vice-President—Mrs. J. J. Pilcher, Wrens.
 Second Vice-President—Mrs. R. C. Pendergrass, Americus.
 Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.
 Corresponding Secretary—Mrs. E. A. Allen, Atlanta.
 Treasurer—Mrs. Chas. Usher, Savannah.
 Historian—Mrs. E. R. Harris, Winder.
 Parliamentarian—Mrs. J. M. Barnett, Albany.
 Editor—Mrs. W. A. Selman, Atlanta.

OUR TASKS, 1933-1934

1. To be guided in all state activities by the Advisory Committee of the Medical Association of Georgia.

2. To secure an Advisory Counsellor or Committee for each county and district Auxiliary and only with their consent to make changes or additions in the state program that local conditions may require.

3. For county and district Auxiliaries to file copies of their Constitution and By-Laws with the State Auxiliary.

4. In each county to have, if feasible, chairman corresponding to State and National Auxiliaries:

Organization	Press and Publicity
Health Education	Historian
Public Relations	Legislation
Hygeia	Health Films

5. To contribute to the Health Film Library and provide this form of education for Auxiliaries and for the public. To assist the Student Educational Fund, now limited to families of physicians in Georgia.

6. To assist in the entertainment at county, district, state meetings and promote unity and friendliness through fellowship.

7. To present the health education program, outlined for us by the Medical Association of Georgia, to all lay organizations; the Medical Association and local societies to appoint speakers, the Auxiliary to supply approved educational material. Mother Welfare, emphasizing prenatal, natal, postnatal care, reporting of births and cancer of the breast and uterus, have been assigned to us, because Georgia ranks 46th in maternal mortality and cancer is a 6th cause of death. Eleven mimeographed three-minute talks are available through local health education chairmen. These may be used monthly in any organization and posted where members may read them or as radio talks. Auxiliary members are urged to secure permission to give these talks; read one at home until you can "sell" the topic to your audience.

8. To accept chairmanships of health and public welfare in other organizations or any office that will forward Auxiliary projects.

9. To contribute to the monthly newsletter and Auxiliary pages of the Journal of the Medical Association of Georgia and to read them.

10. To re-enlist former members and to secure membership of every eligible wife.

11. To cooperate promptly with National Auxiliary recommendations.

12. To make this a year of *Individual Responsibility* for Auxiliary success. To obtain this, we must be informed in Auxiliary tasks, attend meetings for self-education, ask organizations to which we belong, to have a Mother-Welfare program. Each effort, however small, will mean growth in Auxiliary influence and leadership and a satisfactory accounting to the Medical Association of Georgia at the next convention, Augusta, May, 1934.

MRS. J. BONAR WHITE, *President*

NINTH DISTRICT MEETING

The Auxiliary to the Ninth District Medical Society held its semi-annual meeting at Connahaynee Lodge, near Jasper, September 20th. Mrs. W. R. Garner, manager, presided. Eight counties were represented by six auxiliaries.

Mrs. D. H. Garrison, Tate, welcomed the guests and Mrs. C. L. Ayers, Toccoa, responded. Mrs. J. M. Eubanks and Miss E. Humphrey, Tate, gave several piano selections.

During the business session, a report from Mrs. S. T. Ross, Scrap-Book chairman, earnestly requested every member to send material. A motion to adopt the uniform district scrap-book was seconded and carried.

Five auxiliaries reported splendid work; Hygeia subscriptions, welfare work, sewing layettes, entertainment for the doctors, plans for Mother-Welfare programs, showing of health films, supplying and furnishing first aid cabinets and gifts to buy medicine for county health clinics. Habersham has had her Mother-Welfare program for her Auxiliary and Barrow is planning one with the Woman's Club. Important chairmanships and offices in other organizations were reported. Barrow County has taken the lead in celebrating March 30th, the day Dr. C. W. Long first used ether in a surgical operation, as "Doctors' Day," to give honor to the living doctors in her county and bring them some joy in the midst of their labors.

Dr. C. L. Ayers spoke on phases of preventive medicine, the periodic health examination, especially of pre-school children; of immunization; of the obligations wives have and how well many may be met in the Auxiliary. A warning of the ever-present

quack and false cures were emphasized, and the Auxiliary complimented on its work.

Mrs. Bonar White, State President, presented the health education and public relations program outlined for Georgia Auxiliaries and asked each member to be responsible for at least one request for Mother-Welfare in her county. She explained the use of the three-minute talks and how some health chairmen, not doctor's wives, were enthusiastically using them. An approved list of books available in Georgia on social hygiene and copies of Our Tasks, Constitutions and By-Laws were given each President for distribution to her members. Mrs. White clearly and briefly explained the value of social hygiene and how it fitted in our work this year.

Dr. Charles H. Richardson asked the members to guard the health of their husbands, without whom there could be no prevention or cure; to always be prepared to interpret the profession to the public and to carry forward our educational program.

Other state officers present were, the Editor, Mrs. W. A. Selman; Legislative Chairman, Mrs. Dan Y. Sage; Historian, Mrs. E. R. Harris; Past President, Mrs. C. W. Roberts; Fifth District Manager, Mrs. Olin S. Cofer.

Special guests were Mrs. S. F. Filer, Superintendent of Nurses at State Tuberculosis Sanatorium, Alto, and Mrs. Myrtle Thorson, Superintendent of Nurses. The Downey Hospital, Gainesville.

The members of the medical society and Auxiliary had lunch together.

The next meeting will be held at State Tuberculosis Sanatorium, Alto.

FIFTH DISTRICT MEETING

The Woman's Auxiliary to the Fifth District Medical Society met at the Academy of Medicine, 38 Prescott St., Atlanta, Thursday, June 29, 1933, Mrs. Olin S. Cofer, District Manager, presiding.

The minutes of the last meeting were read and adopted.

Mrs. Cofer gave an outline of her work. Among the most important plans of the year were to create good fellowship, increase membership and organize auxiliaries. She described the district scrap book, adopted at the Macon session. It is to be navy blue buckram binding with gold lettering and gold seal.

Mrs. George Fuller, President of the Woman's Auxiliary to the Fulton County Medical Society, gave a report of her work and the activities of her twenty-four committees.

A report of the Woman's Auxiliary to the last annual session recently held in Macon, was read by Mrs. James N. Brawner, giving the changes made in the Constitution and By-Laws at this meeting. The most important was the Student Education Loan Fund, to be lent only to families of physicians.

Mrs. Bonar White, President of the Woman's Aux-

iliary to the Medical Association of Georgia and also First Vice-President of the Woman's Auxiliary to the Southern Medical Association, gave a report of the convention of the Woman's Auxiliary to the A. M. A. recently held in Milwaukee. The A. M. A. Auxiliary divides the country into four sections. The South is the best organized and the only one reporting its quota of state chairmanships in public relations. Georgia was given special notice as the banner state in public relations in its region and commended for its cooperation with its medical association and state board of health in its health educational program.

The Georgia report was heartily applauded at the convention and many states requested copies. Mrs. White had the honor of serving on the nominating committee and announced the election of Mrs. James N. Brawner as a director of the Woman's Auxiliary to the A. M. A. The Woman's Auxiliary of the Fifth District gave Mrs. White a rising vote of thanks for her splendid work.

The meeting was well attended and after adjournment a skit written by Mrs. William H. Myers, Savannah, entitled, "An Unparliamentary Procedure," was presented.

The Auxiliary was invited to attend the Fifth District Medical Society meeting to hear two papers, "Some Hazards of the First Year of Life," by Dr. Charles E. Boynton of Atlanta, and "The Correction of Obesity by Low Caloric Diet," by Dr. Harold Bowcock of Atlanta.

A delightful buffet supper was served to the Auxiliary and the Fifth District Medical Society, at seven o'clock by Dr. and Mrs. Olin S. Cofer as hosts.

MRS. ARTIE S. ASKEW, *Recording Secretary*.

THIRD DISTRICT MEETING

A banquet for members of the Third District Medical Society and their wives was given at the Windsor Hotel, Americus, Tuesday night, July 4th. Dr. S. A. Scruggs, Americus, President of the Sumter County Medical Society, was toastmaster.

Short talks were given by Mrs. Herschel A. Smith, President of the Third District Auxiliary and Mrs. R. C. Pendergrass.

After dinner Dr. C. H. Richardson, Macon, President of the Medical Association of Georgia, spoke to the group. Mrs. Olin Dixon accompanied by Mrs. A. G. Ketchum, rendered a vocal solo. Mrs. J. W. Mears, Jr., entertained with a group of readings.

Short addresses were given by Dr. Loren Gary, President of the Third District Medical Society; Dr. Charles A. Greer, Secretary-Treasurer; Dr. A. G. Fort, Dr. T. J. McArthur, Past President, and Dr. J. C. Patterson, Councilor of the Third District.

A scientific meeting was held during the afternoon, at which addresses and discussions on various subjects of interest to the medical profession were given.

After a business meeting at the Windsor hotel, the Woman's Auxiliary of Sumter County entertained

members of the Association at the home of Mrs. Herschel Smith, on Lee Street.

Conventions are held semi-annually. New officers are elected annually. The next meeting will probably be held in October.

RADIUM SPRINGS MEETING

Dr. Charles H. Richardson, President of the Medical Association of Georgia and Dr. B. H. Minchew, Chairman of the Advisory Committee of the Woman's Auxiliary to the Medical Association of Georgia, called a meeting of the Advisory Board, the Commissioner and the Deputy Commissioner of the State Board of Health, the officers and standing chairmen of the Auxiliary which was held at Radium Springs, Wednesday, July 12, 10:30 A. M. Nineteen were present including several interested visitors.

After deliberation, it was decided to continue the program on Mother-Welfare begun last year as a second year would bring even better results, because so much had been accomplished and the program so well received. Moreover, emphasis is still required on this phase of health work which remains a most important problem in Georgia. Mother Welfare includes important facts in regard to cancer and about maternity.

Permission was given the Auxiliary to reprint pamphlets published last year and two additional ones, "Personal Hygiene" and "Social Hygiene".

Dr. Richardson extolled the health educational program as carried out by the Auxiliary and asked the Auxiliary to give special attention to Public Relations and to "selling" the Medical Profession to the public. He urged members to become members of other organizations so they would be in better position to carry the aims and purposes of the medical profession to the laity.

After adjournment, the Executive Board of the Auxiliary met for a brief session.

INCREASE IN INSANE PATIENTS

Pasadena, October 9—Ten thousand additional beds are needed in the hospitals of the United States each year, to care for the increase in insane patients.

This is the report of the Human Betterment Foundation which is urging more effort at prevention through the sterilization in selected cases of persons whose offspring will be likely to become insane.

"Every effective measure must be used," it declares, "to reduce this increasing burden, which not only creates immense misery, but costs the tax payers more than a billion dollars a year. Most patients can be cured, but prevention is better yet."

Food, Nutrition and Health, by E. V. McCollum, Ph.D., Sc.D., and J. Ernestine Beck, M.A., Professor and Associate of Biochemistry, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Md. Third Edition rewritten. Contains 146 pages. Publishers: E. V. McCollum and J. Ernestine Becker, East End Post Station, Baltimore, Md. Price \$1.50.

BOOK REVIEWS

Surgery of the Stomach and Duodenum, by J. Shelton Horsley, M.D., F.A.C.S., LL.D., Attending Surgeon, St. Elizabeth's Hospital, Richmond, Va. Published by The C. V. Mosby Co., St. Louis, 1933.

This monograph of 260 pages and 136 illustrations affords a wholly adequate and modern dissertation on the surgery of the stomach and duodenum. With its review of anatomy and physiology, and inclusion of most of the principal diseases of the stomach and duodenum, it is more than surgery. It is a book for every practitioner of medicine, whether surgeon or physician. Little or no space is devoted to old teachings and methods which consume numerous pages in many texts. For this reason Dr. Horsley is enabled to cover his subject thoroughly in a comparatively small volume, especially as he never uses a superfluous paragraph or sentence.

Not only is the text new and original, but the same can be said of the fine illustrations of Miss Helen Lorraine, whose art is always such an attractive and important feature of the author's papers and books. An average of an illustration on every second page furnishes a proportion of pictures rarely seen. Such pictures add materially to Dr. Horsley's clear and convincing style of writing. In a text of this kind good illustrations are indispensable. They represent hard work on the part of their originator and much expense to the publisher in reproduction.

The volume deals with the latest ideas and surgical technic concerning some of the most discussed subjects in medicine. The chapter on cancer is particularly praiseworthy. While he gives others credit for their contributions, more than ninety per cent of the work is based on the author's extensive and illuminating personal experience. It is a delightful book to read through in an evening, and to consult later as the occasion arises. The dedication is pleasing: "To my colleague and rival, Stuart McGuire." Mosby is to be congratulated upon another creation so easy on presbyopic eyes.

FRANK K. BOLAND, M.D.

The Diseases of Infants and Children. By J. P. Crozer Griffith, M.D., Ph.D., Emeritus Professor of Pediatrics in the University of Pennsylvania, etc., and A. Graeme Mitchell, M.D., B. K. Rachford, Professor of Pediatrics, College of Medicine, University of Cincinnati; Medical Director and Chief of Staff of the Children's Hospital of Cincinnati, etc. Third edition. Price, \$10.00. Pp. 1155, with 281 illustrations, including 18 plates in colors. Philadelphia and London: W. B. Saunders Company, 1933.

In this, the third edition, a work of formerly two volumes has been condensed into one volume. In this condensation nothing of importance has been omitted and many of the longer and more tedious portions have been markedly clarified. The subject matter is clearly written, concise, and not dogmatic. The pediatric literature has been thoroughly searched

and the progressive material thoroughly incorporated in this volume. The references are clearly shown and are placed at the end of each chapter, which is a real aid in easy reading of the text. The arrangement is logical and complete in every detail. The illustrations and charts are placed as nearly as possible opposite the subjects referred to, and are clear cut and easily understandable. The indexing is simple but thorough. For routine study by students and for quick and ready reference by the general practitioner or the pediatrician, I would heartily recommend this work.

T. F. DAVENPORT, M.D.

Arteriosclerosis: A Survey of the Problem; A Publication of the Josiah Macy, Jr., Foundation. Edited by Edmund V. Cowdry, Ph.D., Professor of Cytology, Washington University School of Medicine, St. Louis. Price \$5.00. Pp. 617. New York: The Macmillan Company, 1933.

It is surprising to learn how many additions to our knowledge of the subject of arteriosclerosis have been made in the past decade. This book brings such knowledge pretty well up to date: some 1933 references are included. It is thoroughly authoritative too, for chapters have been contributed by twenty-three authorities of international renown.

Another reviewer has termed this work "the most illuminating and outstanding contribution to the study of arteriosclerosis yet made." This praise is well-founded and is heartily concurred in by the present writer. It is unquestionably the outstanding work of reference in this field and should prove of great value for years to come.

However, the clinical aspects of arteriosclerosis are so greatly subordinated to the purely scientific ones that one is justified in saying that a physician can continue to practice excellent medicine without this book at his elbow.

L. M. B.

PENETRATING WOUNDS OF THE CHEST

J. CALVIN SANDISON, M.D.

DANIEL C. ELKIN, M.D.

Atlanta

From the Whitehead Surgical Research Laboratory and the Department of Surgery, Emory University.

Thoracic Surg. Vol. 2:453 (June) 1933

From the experimental work on dogs, we conclude that the pleura has several characteristics in common with the peritoneum. Both membranes are capable of complete and rapid absorption of blood. Blood clots placed in the cavities lined by each of these two membranes are completely absorbed with a minimum of adhesions. Blood and blood clots do not predispose these cavities to infection. On the other hand, from the work of Allen and that of Rademaker, it would appear that these membranes react differently to blood in the presence of infection. Allen, for

example, has shown that blood plus infection in the pleural cavity is more likely to produce empyema than when the blood is not present. In the peritoneal cavity, however, Rademaker has recently reported that when blood and organisms are introduced together, the "blood not only gives no predisposition to peritonitis, but offers a moderate degree of protection against it, at least in the case of colon bacillus."

In our own experimental work, we have no facts that would lead us to confirm or disagree with Allen's statement that blood in penetrating wounds of the chest should be removed to prevent predisposition of the pleura to empyema. We can say, however, that in the clinical cases here reported, we made no attempt to remove all the blood and the incidence of empyema was extremely low; namely, three patients out of one hundred, two of whom had gunshot wounds with open drainage, and they recovered. One other patient developed an abscess around a bullet in the lung; the patient recovered after open drainage and removal of the foreign body.

The mortality rate for the total number of clinical cases was 12 per cent, of which 10 per cent were gunshot wounds and 2 per cent were stab wounds. One-half of the patients with gunshot wounds died, whereas only 2 of the 76 patients with stab wounds died; consequently, the prognosis is far more guarded in the former type of injury.

BOOKS RECEIVED

Nervous Breakdown, Its Cause and Cure by W. Beran Wolfe, M.D., Director of the Community Church Mental Hygiene Clinic, New York City. "A handbook of common sense advice, written for the layman by a doctor who not only knows how to treat a nervous breakdown but who knows how to write about it. Scientifically sound, but written for you, so that you can understand and benefit by it. Nervous Breakdown is a book the general practitioner can safely put into the hands of his nervous patient—a book for the family of a nervous patient—a book for a man or woman in the throes of a nervous breakdown." Contains 240 pages. Publishers: Farrar & Rhinhart, Inc., On Murray Hill, New York. Price \$2.50.

Obstetrical Nursing—A Textbook on the Nursing Care of the Expectant Mother, The Woman in Labor, The Young Mother and Her Baby, by Carolyn Conant Van Blarcom, R.N., formerly Assistant Superintendent and Instructor in Obstetrical Nursing and the Care of Infants and Children at the Johns Hopkins Hospital Training School for Nurses. Author of the "Midwife in England," "Getting Ready to Be a Mother." Third Edition, revised by the assistance of Calvina MacDonald, R.N., Lilla J. Napier, R.N., Lottie M. Morrison, R.N., Anne A. Stevens, R.N., and Chelly Wasserberg, R.N. Contains 651 pages. Publishers: The Macmillan Company, 60 Fifth Avenue, New York City. Price \$3.00.

NEWS ITEMS

Dr. R. P. Adams, formerly of Bethlehem, has removed to Winder and will continue the practice of medicine at the latter location.

Dr. and Mrs. W. H. Clark, LaGrange, entertained a group of medical students in their home on Vernon Road before they left to attend the fall terms of their respective schools.

Dr. Joseph S. Bolton has been appointed Medical Officer in Charge of the United States Marine Hospital, Savannah. Dr. Bolton was transferred from Galveston, Texas.

Dr. L. P. Holmes, Augusta, acting Superintendent of the University Hospital, Augusta, in a preliminary report to the Trustees stated that while the loss to the city of Augusta for 1932 was \$1,948.69; operating loss for the first seven months of 1933 was only \$480.65.

The University of Georgia Medical Department, Augusta, opened its 1933-34 term on September 25th.

Dr. S. E. Sanchez, Barwick, reported one case of encephalitis lethargica to the Department of Public Health early in September.

The Fulton County Medical Society met at the Academy of Medicine, 38 Prescott Street, N.E., Atlanta, on September 21st. Drs. Lon Grove and Joseph C. Read, gave a case report, "Unusual Case of Intussusception"; Dr. W. C. Waters gave a clinical talk, "Respiratory Disturbances Due to Food Allergy"; Dr. Mark S. Dougherty read a paper entitled "Amebiasis—General Consideration." The discussions were led by Drs. Frank K. Boland, Wm. H. Trimble and Geo. F. Eubanks.

The Committee on Foods of the American Medical Association has printed in pamphlet form Rules and Regulations on "Information of the 'Seal of Acceptance' and Submission of Foods." The purpose of the Committee is to: "Prevent or discourage unwarranted, incorrect or false advertising claims in the promotion of food products, and thus protect the public and the medical profession against deception by untruthful or fraudulent 'health,' nutritional or other advertising claims for foods."

Two cases of poliomyelitis were reported in Macon on September 19th. These were the first cases reported in Macon or Bibb county in a number of years.

Dr. and Mrs. S. L. Waites, Covington, entertained a number of friends complimentary to Dr. Lon Grove, Atlanta, on September 15th.

Dr. C. A. Witmer, Waycross, has been elected to Fellowship in the American College of Surgeons.

Dr. Chas. L. Hicks and Dr. Wm. C. Thompson have opened the Hicks-Thompson Sanitarium in the Dublin Clinic Building on Bellevue Road, Dublin. Patients will be admitted for diagnosis, medical treatment, x-ray and surgery.

Dr. John H. Snoke, Lansdowne, Pa., has been elected superintendent of the University Hospital, Augusta. He has had more than twenty years experience in such work.

The regular staff meeting of Grady Hospital, Atlanta, was held on September 12th. The following gave reports of cases: Dr. C. W. Strickler, Atlanta, "Bilateral Adrenal Carcinoma"; Dr. Jack C. Norris, "Pathological Specimens"; Dr. Dan C. Elkin, "Arteriovenous Aneurysm."

The Third Quarterly Clinic of the Ware County Hospital, Waycross, was held on September 26th. The scientific program consisted of "Crippled Children's Clinic" by Dr. Fred G. Hodgson, Atlanta; "Urological Clinic," Dr. W. F. Reavis and Dr. W. C. Hafford, Waycross; "Medical Clinic," Dr. B. R. Russell, Waycross; "Report of Case of Bronchospirchosis with Lung Abscess and Secondary Bronchomycosis. Lab. and X-ray Findings," Dr. J. E. Penland, Dr. G. E. Atwood, Dr. Kenneth McCullough and Dr. W. L. Pomeroy, all of Waycross; "Report of Case of Aneurysm of the Aorta," Dr. A. W. DeLoach and Dr. H. A. Seaman, Waycross; "Some Mistakes to Avoid in the Treatment of Cretinism," Dr. C. M. Stephens, Waycross; "Eye, Ear, Nose and Throat Clinic," Dr. B. H. Minchew and Dr. W. D. Mixson, Waycross; "Surgical Clinic," Dr. Kenneth McCullough, Waycross; "Osteochondroma of the Pubis and Ischium," Dr. W. L. Pomeroy and Dr. H. A. Seaman, Waycross; "Presentation of Case of Stone in Lower Ureter—Technic of Removal," Dr. H. A. Seaman, Waycross; "Surgical Procedures in Treatment of Tuberculosis and Related Conditions," Dr. W. L. Pomeroy, Waycross; "Gonococcal Peritonitis," Dr. R. L. Johnson, Waycross. The staff and visitors were guests of the Lions Club at dinner at the Ware Hotel.

The Annual Meeting of the Society of Plastic and Reconstructive Surgery was held at New York City, October 16, 17, 18. Demonstrations were given at the New York Academy of Medicine, New York Hospital and Cornell University Medical College, Institute of Ophthalmology Columbia Medical Center, New York Postgraduate School and Hospital, Sydenham Hospital, and Manhattan, Eye, Ear, Nose and Throat Hospital.

The Ninth District Medical Society met at Conahaynee Lodge, near Jasper, on September 20th. Dr. Grady N. Coker, Canton, read a paper entitled "Rare Findings in the Surgical Abdomen"; Dr. Dan C. Elkin, Atlanta, "Treatment of Aneurysm," discussed by Dr. E. L. Ward, New Holland; "Address,"

Dr. C. L. Ayers, Toccoa, President-Elect of the Association. Luncheon was served at the Lodge promptly at 12:00 o'clock noon. Fishing, swimming and a golf tournament were the entertaining features for the afternoon.

The Randolph County Medical Society met at Cuthbert on October 5th. The scientific program consisted of reports of clinical cases by members.

The Walker County Medical Society in cooperation with the State Board of Health conducted "Chest Clinics" at Chickamauga, October 5-6; Rossville, October 9-10; LaFayette, October 11-12-13.

Dr. and Mrs. O. N. Harden, Cornelia, entertained the members of the Habersham County Medical Society and Auxiliary at their home on September 21st. A "picnic supper" was served.

The Tri Medical Society (Calhoun, Early and Miller Counties) met at Blakely on September 21st. Dr. C. K. Sharp, Arlington, spoke on the "Policies of the State Board of Health"; Dr. D. L. Seckinger read a paper entitled "The Treatment of Malaria with Special Reference to Atabrine"; Dr. J. G. Standifer, Blakely, "The Treatment of Burns."

The doctors of Bleckley, Dodge and Pulaski counties (Ocmulgee Medical Society) met at Eastman on September 25th to organize a "Credit Bureau." The organization is something similar to that of the Telfair County Medical Society which has brought out a great deal of publicity in the newspapers of the state.

Dr. I. W. Irvin and Dr. W. S. Cook, Albany; Dr. F. L. Lewis and Dr. D. P. Luke, Camilla, and Dr. C. W. Twitty, Elmodel, conducted a pre-school clinic at Newton on September 7th. There were 271 children examined.

The Troup County Medical Society met at LaGrange on September 21st. Dr. Jas. E. Paullin and Dr. Jack Jones, both of Atlanta, gave a symposium on "Skin Diseases."

The Seventh District Medical Society met at Cartersville on September 27th. Titles of scientific papers on the program were: "The Importance of Early and Regular Examinations of the Pregnant Woman" by Dr. J. L. Chandler, Rome; discussed by Dr. C. L. Ellis, Kingston, and Dr. Z. V. Johnston, Calhoun. "Diseases of the Uterus with Special Reference to Malignancies," Dr. D. L. Wood, Dalton; discussed by Dr. W. P. Harbin, Rome, and Dr. P. O. Chaudron, Cedartown. "The Significance of Pelvic Pain," Dr. W. H. Lewis, Rome; discussed by Dr. H. L. Erwin, Dalton, and Dr. C. D. Elder, Marietta. "Diuretics and Their Use," Dr. Carter Smith, Atlanta; discussed by Dr. S. M. Howell, Cartersville, and Dr. R. C. Maddox, Rome. "Rocky Mountain Spotted Fever, Clinical Diagnosis—Case Report," Dr. D. Houseworth, Douglasville; discussed by Dr. H. S. McGowan, Car-

tersville, and Dr. W. B. Hair, Summerville. "Observations in the Treatment of Gonorrhea," Dr. A. F. Routledge, Rome; discussed by Dr. C. V. Wood, Cedartown, and Dr. S. B. Kitchens, LaFayette.

Dr. and Mrs. C. C. Aven entertained the medical staff of the Atlanta Tuberculosis Association at dinner in their home, 2310 Gordon Road, Atlanta, on September 28th. The scientific program consisted of a paper by Dr. E. A. Bancker, Jr., Atlanta, entitled "Review of Literature on Reinfection in Tuberculosis"; Dr. C. H. Holmes, Atlanta, read a paper on "Some Practical Points in Chest Examinations."

Dr. Cleveland Thompson, Millen, Councilor of the First District, entertained the physicians of Waynesboro, Vidalia, Sylvania, Midville, Sardis and Vidette at dinner at the Millen Hospital on September 26th. Reports of cases and other interesting work in the hospital during the past month were the features of the scientific discussions.

Dr. J. Harris Dew announces the opening of offices at 126 Forrest Avenue, N.E., Atlanta. Dr. Dew will be associated with Dr. G. Pope Huguley.

Dr. W. L. Pomeroy and Dr. H. A. Seaman entertained the members of the Ware County Medical Society to supper at Phelps's Dairy, near Waycross, on October 4th. Dr. Seaman read a paper entitled "Paralytic Ileus."

Dr. J. A. Redfearn, Albany, announces the installation of a portable electrocardiograph in the Doctor's Building.

The Eighth District Medical Society met at Valdosta, October 10th. The meeting was held at Hotel Valdes. The scientific program consisted of the following titles of papers: "Laboratory and X-Ray Findings in Bronchospirochetosis," Dr. G. E. Atwood, Waycross; reports of cases by Dr. H. A. Seaman and Dr. T. J. Ferrell, Waycross. "Vomiting in Infancy," Dr. A. M. Johnson, Valdosta. "Some Interesting Proctologic Problems," Dr. Geo. F. Eubanks, Atlanta. "Diagnosis and Management of Diseases of the Biliary Tract," Dr. Chas. H. Richardson, Macon, President of the Association. "The Management of Pelvic Inflammatory Disease," Dr. Kenneth McCullough, Waycross. Dinner was served at the Daniel Ashley Hotel.

The doctors, dentists and druggists of Pelham have organized an association for their mutual benefit and protection. Meetings for the discussion of their mutual problems will be held monthly.

Dr. Ernest F. Wahl, Thomasville, read a paper at the regular meeting of the Macon Medical Society on October 3rd, entitled "The Mucin Treatment of Peptic Ulcer."

The American College of Surgeons announces the list of approved hospitals in Georgia as follows:

Atlanta—Crawford W. Long Memorial Hospital, Georgia Baptist Hospital, Grady Hospital, Henrietta Egleson Hospital for Children, Piedmont Hospital, St. Joseph's Infirmary, U. S. Penitentiary Hospital, U. S. Veterans' Hospital, Wesley Memorial Hospital: Albany—Phoebe Putney Memorial Hospital: Athens—Athens General Hospital: Augusta—University Hospital, U. S. Veterans' Hospital, Wilhenford Hospital for Women and Children: Canton—Coker's Hospital: Cuthbert—Patterson Hospital: Decatur—Scottish Rite Hospital for Crippled Children: Gainesville—Downey Hospital: Macon—Macon Hospital, Middle Georgia Sanatorium: Millen—Millen Hospital: Plains—Wise Sanitarium: Rome—Harbin Hospital, McCall Hospital: Savannah—Central of Georgia Railway Hospital, U. S. Marine Hospital: Thomasville—John D. Archbold Memorial Hospital: Waycross—Atlantic Coast Line Hospital, Ware County Hospital.

The Jackson-Barrow Counties Medical Society and the Walton County Medical Society held a joint meeting at Winder on October 2nd. The scientific program consisted of a Symposium on Hypertension.

Dr. N. M. Owensby, Atlanta, spoke on "Legal Sterilization of the Feeble-minded" at a meeting of the Men's Club of the United Liberal Church, Atlanta, October 3rd.

The Lamar County Medical Society met at Barnesville on October 4th. The following resolutions were adopted: "(1) *Professional Deadbeats*—persons who have no idea of paying for professional service when calling a doctor. (2) *Luxury Deadbeats*—persons who fail to pay because of the installments on their radios, autos, and numerous other luxuries. (3) *Circumstantial Defaulters*—those who, on account of adverse circumstances have been unable to pay, but who have had the honesty to do whatever they could and make due explanations to their physicians. The physicians will respond to calls from relief organizations for those in classes 1 and 2 for cash only. People under the 3rd classification will be cared for as heretofore.

Dr. Agnew Andrews announces the opening of offices in 402-6 Upchurch Building, Thomasville, practice limited to diseases of the ear, nose and throat. Dr. Andrews has spent a year and a half taking postgraduate study at the New York Polyclinic Medical School and Hospital, New York City. His work for more than two years has been limited to diseases of the ear, nose and throat.

The Meriwether County Medical Society met at Greenville on October 7th. It was a business meeting in which all members agreed to demand advance payment by people who were able to pay for medical service and had neglected to do so. Strictly charity patients, that is, those who through misfortune are unable to pay, will be cared for as has been the policy of the members in the past.

The Waycross Journal-Herald in its editorial columns compliments the members of the Ware County Medical Society. Under the title of "Professional Unity," it states in part: "No city in Georgia ranks so high as does Waycross in the professional unity of its medical men. The Ware County Medical Society has been outstanding in Georgia for many years because of the united effort of the medical men. The one who profits most by this outstanding medical unity is not the medical man but the general public."

The doctors of Bleckley county have organized a credit bureau for their mutual benefit and protection. People who have "settled their accounts" in the past by changing doctors will not find this a satisfactory or convenient method of settlement in the future, if they are able to pay for medical service.

OBITUARY

Dr. Arthur Dermont Bush, Decatur; member; Southern Medical College, Atlanta, 1901; aged 57; died in Albany, New York, September 6, 1933. He was author of a number of text books which included "Pharmacology," "Laboratory Manual of Pharmacology" and "Textbook of Pharmacology." Dr. Bush conducted research work in many subjects. He began teaching after graduating in medicine. At one time he was on the faculty of the University of Southern California School of Medicine, Los Angeles; University of North Dakota School of Medicine, Grand Forks, N. D., and Emory University School of Medicine, Atlanta. Surviving him are his widow and one daughter, Mrs. H. R. Carter, Decatur.

Dr. Isaac Noel Stowe, Atlanta; Georgia College Eclectic Medicine and Surgery, Atlanta, 1893; aged 62; died at his home, 1064 West Peachtree Street, on September 7, 1933. He was born in Opelika, Ala., and had practiced medicine in Atlanta for more than a quarter of a century. Dr. Stowe had been active in the practice of medicine until the time of his death and had many warm personal friends. He was a Mason and a member of St. Marks Methodist church. Surviving him are his widow and one son, Noel R. Stowe, Atlanta. Funeral services were conducted from the chapel of Sam R. Greenberg by Rev. S. H. C. Burgin and Dr. Wallace Rogers. Burial was in the city cemetery of Opelika, Ala.

Dr. George Sewell Clark, Hartwell; Atlanta College of Physicians and Surgeons, Atlanta, 1899; died at a private hospital at Royston after an illness of several weeks on September 25, 1933. For many years he was a leading physician in Hart and adjoining counties, former Chairman of the Hartwell Board of Education and took an active interest in all civic and religious affairs. He was a member of the Shrine and the Baptist church. Surviving him are his widow, one son, Geo. S., Jr., of Washington, D. C.; three daughters, Misses Beverly, Sarah and Mary Clark, all of Hartwell.

Dr. Claude Brantley Brookins, Gordon: University of Georgia Medical Department, Augusta, 1912; aged 47; died suddenly at his home on September 25, 1933. He did an extensive practice in Gordon and in adjoining counties. Dr. Brookins was favorably known by hundreds of friends. He was a member of the F. & A. M. Surviving him are his widow and one daughter, Mrs. Elmo Beck of Gordon.

Dr. Sampson F. Williams, Cordele: Physio-Medical Institute, Cincinnati, Ohio, 1885; aged 82; died at his home after a long illness on September 28, 1933. He was born and reared in Lexington county, S. C. Dr. Williams moved to Cordele in 1907 and had endeared himself to many acquaintances. He was charitable and sympathetic in all his dealings and undertakings. Surviving him are his widow; two sons, Roger G., Macon; L. E., Flint, Mich.; two daughters, Mrs. T. D. Walker, Quantico, Va., and Mrs. Daniel Cushing, Cambridge, Mass. Funeral services were conducted from Harrison's Funeral Home. Interment was in Sunny Side cemetery.

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Professors Drummond and Hilditch have recently confirmed that for high vitamins A and D potency, Newfoundland Cod Liver Oil is markedly superior to Norwegian, Scottish and Icelandic Oils.

They have also shown that vitamin A suffers considerable deterioration when stored in white glass bottles.

For years, Mead's Cod Liver Oil has been made from Newfoundland Oil. For years, it has been stored in brown bottles and light-proof cartons.

Mead's 10 D Cod Liver Oil also enjoys these advantages, plus the additional value of fortification with Mead's Viosterol to a 10 D potency. This ideal agent gives your patients both vitamins A and D without dosage directions to interfere with your personal instructions. For samples write Mead Johnson & Company, Evansville, Ind., U. S. A. Pioneers in Vitamin Research.

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The doctor who says, "Drink plenty of milk" can be reasonably sure of his patient's cooperation if he recommends Cocomalt. For even those who heartily dislike milk find Cocomalt a delicious and palatable drink.

Furthermore, prepared in accordance with the simple directions on the label, Cocomalt adds 70 per cent more caloric value to milk. Thus every cup or glass a patient drinks is equal in food-energy to almost two glasses of milk alone.

Cocomalt mixed with milk is especially valuable in pregnancy and lactation, for it is rich in vitamin D. A glass of Cocomalt, properly prepared is equivalent in vitamin D content to two-thirds of a teaspoonful

of good cod liver oil. Cocomalt is licensed by the Wisconsin University Alumni Research Foundation under the Steenbock patent. It is accepted by the Committee on Foods of The American Medical Association.

BORDEN'S EVAPORATED MILK

Borden's Evaporated Milk, which is now enjoying such a great vogue in infant feeding, is manufactured only from pure, full cream milk from healthy, inspected cattle in the richest dairy regions of America.

"This product," says a scientific pamphlet, which is accepted by the Committee on Foods of the American Medical Association, "precisely fulfills the exacting requirements of safety, digestibility and assimilability, uniformity, stability, and nutrient quality demanded by the physician for the infant feeding formula."

That this is so has been demonstrated by many clinical tests on large groups of babies, as well as by the experience of physicians with innumerable individual cases. Of particular interest is a recent study by Jeans and Stearns (Am. Jour. Dis. Childr. 46:69, July, 1933) showing that the retentions of nitrogen, calcium, and phosphorus by infants on evaporated milk are approximately the same as those of infants fed on undiluted acidified fresh milk.

Evaporated milk, says Tobey in his new book, "Milk, The Indispensable Food" (Olsen, 1933), is the most digestible form of milk; this author also points out that the important vitamins A, D, E, and G are not appreciably affected when milk is evaporated, although there may be a slight loss of vitamin B and destruction of vitamin C. Since these vitamins are easily replaced in the diet by the supplementary foods routinely given to all babies, such as orange juice, this slight loss is of no practical significance and is more than compensated for by the many other advantages of a product such as Borden's Evaporated Milk.

PABLUM—MEAD'S PRE-COOKED CEREAL

Mead Johnson & Company are now marketing Mead's Cereal in dried pre-cooked form, ready to serve, under the name of Pablum. This product combines all of the outstanding mineral and vitamin advantages of Mead's Cereal with great ease of preparation.

All the mother has to do to prepare Pablum is to measure the prescribed amount directly into the baby's cereal bowl and add previously boiled milk, water, or milk-and-water, stirring with a fork. It may be served hot or cold and for older children and adults, cream, salt and sugar may be added as desired.

Mothers will co-operate with physicians better in the feeding of their babies because Pablum is so easy to prepare. It gives them the extra hour's rest in the morning and saves bending their backs over a hot kitchen stove in summer. Please send for samples to Mead Johnson & Company, Evansville, Indiana.

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SYMPOSIUM ON HYPERTENSION

Doctors Calhoun, Pund, Chrisman, Sydenstricker and Charlton

ETIOLOGY OF HYPERTENSION*

ABNER W. CALHOUN, M.D.
Atlanta

To discuss the etiology of hypertension is to admit with Fishberg "that there are few fields in medicine in which ignorance is so profound." Hypertension is a symptom and, like fever, is a manifestation of some underlying disturbance with many causes. It is my purpose to discuss some of the supposed influencing factors and their significance, finally presenting a scheme, following O'Hare, of the development of hypertension with its end results.

The factors which determine the blood pressure are:

1. Blood volume.
2. Blood viscosity.
3. Peripheral resistance.
4. Force of the heart beat.
5. Elasticity of the blood vessel wall.

A derangement of any of these factors may result in an elevation of the blood pressure, which may be temporary or permanent. The temporary elevations, such as occur in pain, excitement, physical exercise, and late pregnancy, are unimportant in this paper and will not be discussed. It is the permanent elevation which is usually spoken of as hypertension, hyperpiesia, or high blood pressure—the subject of this discussion, and may be defined as a functional disorder, the cause of which is unknown; characterized by an increased and permanent elevation of the blood pressure. It is found at all ages, but with increasing frequency after middle life, the most common period for its onset. It occurs, with equal frequency, in both men and women.

There have been many theories as to the

cause of hypertension, but it is now agreed by most authorities that a narrowing of the peripheral blood vessel bed, together with the resultant increase in the force of the heart beat, is the primary disturbance. There is little evidence that there are changes of any clinical importance in the blood volume or viscosity occurring as etiologic factors in hypertension. The change in the elasticity of the blood vessel walls, when it takes place in the arterioles, is a late manifestation of hypertension, and when of the larger arteries, has very little if any significance in hypertension.

Now the blood vessels and general vascular system take their nerve supply from the sympathetic and parasympathetic nervous system with its primary seat of control in the brain, located more specifically in the medulla oblongata in the region of the obex. It is through the overstimulation of the sympathetic paths as opposed to the antagonistic parasympathetic paths that the blood vessels are bombarded with a barrage of impulses which cause their over-constriction, resulting in the narrow peripheral vascular bed. It is also known that this influence is most markedly exerted upon the smallest of the arteries, termed arterioles, such arteries as are found in the retina and as afferent arteries to the glomeruli in the kidney, and are located in the vascular system just proximal to the capillaries. Cannon, in a series of experiments in dogs, progressively, in three operations, performed a total sympathectomy. He found that his animals lived but that after each operation there was a distinct drop in the blood pressure below the average; showing the sympathetics to be the controlling factor in vasoconstriction. Thus through the sympathetic nervous system the arterioles are thrown into a state of over-contraction

*Read before the Medical Association of Georgia, Macon, May 11, 1933.

with a resultant narrowing of the arterial bed, a compensatory increase in the force of the heart beat and an elevation of the blood pressure. It is concerning the nature of the force back of the over-stimulation of the sympathetic system that so much discussion arises.

Primarily only one factor has been definitely determined—the factor of heredity. O'Hare, et al, in a series of 300 cases of hypertension found a positive family history of cardiovascular-renal disease in 68 per cent—in 100 private patients the family history was positive in 76 per cent, as compared to a control series of 436 cases whose family history for cardiovascular-renal disease was only 37.6 per cent. Of these 300 hypertensive cases, 42 per cent had early symptoms of vasomotor instability, the controls manifesting these symptoms in only 23 per cent.

The negro is more susceptible to hypertension than is the white—developing the signs and symptoms at an earlier age period and suffering more severe and quicker results of the strain on his vascular system.

Infections have been blamed as a cause of hypertension, but this factor is one of coincidence rather than fact. In many extensive series no evidence has been found that infection plays any part in the etiology. Chronic infections such as arthritis are frequently found in hypertension but this is probably due to the coincident age period of the two diseases rather than an etiologic relationship. Only in the hypertensives who have their origin in acute nephritis is infection of any importance and here nephritis is important in the etiology rather than the secondary hypertension.

Syphilis actually seems to have a lower percentage of incident in groups of hypertensives than in controls and can in no way be blamed as a cause.

The endocrines have had their day and still seem important to a few workers in this field. That the thyroid in its overactivity and sometimes in myxedema is associated with an elevation of blood pressure is an established fact, but Hurxthal has shown conclusively that diseases of this gland have no influence in the development of a permanent cardiovascular-renal disease.

The frequency with which hypertension has been found in connection with the climacteric has suggested a close relationship between gonadal function and hypertension. It has been found that at the time of puberty there is a slight rise in blood pressure, returning to normal when an adult life is established. Frequently just before the menopause there is a rise in blood pressure, which continues to rise, reaching its height with the height of menopause symptoms. It is suggested that the gonads exercise a control or regulating effect upon the pressor excretions of the pituitary and adrenals and that as this is lost, the blood pressure rises. It is to be remembered, however, that the climacteric occurs at the same age period that hypertension is most frequently found, regardless of gonadal activity, and that the incidence of hypertension in younger people with an artificial menopause is no higher than the general population. Most authorities agree that, here again, the occurrence of hypertension is purely coincidental. The occurrence of such marked nervous manifestations as are seen at this period may be of greater importance in the development of hypertension.

Salt has played a large but shortlived place in the discussion of the etiology of hypertension. Allen in 1920 from experimental and clinical data thought that salt was an important factor and that reduction in the salt content of the diet would definitely lower the blood pressure. This point was disputed by O'Hare, who showed that in a group of controlled hypertensives there was no relation between the elevation of the blood pressure and the salt content of the diet or the salt elimination in the urine. Only in the nephritics with a lowered ability to excrete salt, is it important, and here its importance is associated with water retention and edema, rather than blood pressure.

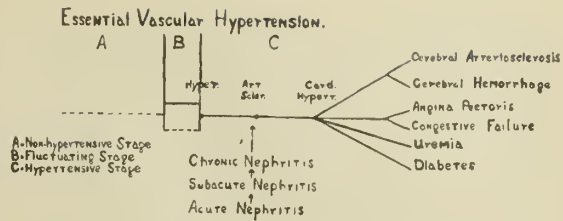
The end products of protein metabolism must be excreted by the kidneys and this requires work. For this reason excessive amounts of proteins are not allowed hypertensives. There are no proved data, however, that protein increases the blood pressure.

Much work has been done on the relationship of hyperglycemia and blood pressure.

O'Hare found that in a group of hypertensives there was a lower sugar tolerance which he interpreted as a deficient pancreatic secretion associated with arteriosclerosis. The lowered sugar tolerance has more recently been explained on the basis of hyperadrenalism attempting to maintain a normal blood sugar. Herrick also found that in the obese, with diets aimed at lowering the blood sugar, there was a lowering of the blood pressure. In hypertension Oppenheimer and Fishberg have found an anatomic hyperplasia of the adrenals. In Addison's disease, the blood pressure is low. There is no clinical or experimental proof of hyperadrenalism except in the isolated cases of adrenal tumor, a few of which have had a return to normal blood pressure after removal of the tumor. Further in glucose tolerance tests no changes in the blood pressure are noted despite marked rises in the blood sugar. The general feeling is that hyperglycemia does not cause an elevation of the blood pressure. Crile's work on the relationship between the adrenals and sympathetic over-stimulation is interesting but it is too early yet to be of proven etiologic value.

Following a suggestion of Sir George Johnson in 1868, that the blood of hypertensives contained some very powerful vasoconstrictor, Major and many others have been doing some most interesting work in the field of the chemistry of the blood, with the hope of isolating some toxic pressor substance as a cause for hypertension. This substance is present either because it is produced in abnormal amounts by a faulty decomposition of proteins or because the body has lost its power to detoxify or eliminate this substance, normally present in small non-toxic amounts. Many very interesting pressor substances, notably histamine, choline and its derivatives, the guanidine bases and others, some unidentified so far, have been isolated and studied. While this work offers many possibilities and hopes, the proof of the pudding is not yet to be had and much further experimental work must be done before these substances can be given a definite place.

Starling found in experiments on dogs that with an artificial diminution of the



blood supply to the brain, especially the medulla and vasomotor center, the peripheral blood pressure would be raised, to fall again with the return of normal circulation. With this thought Bordley and Baker, and later Tuthill, studied pathologically the arteries supplying the vasomotor center in a group of autopsies on hypertensive patients. They found that in practically all there was a definite arteriosclerosis with narrowing of the blood vessels in this area and concluded that, at least, an anatomic explanation for hypertension has been found. This sclerosis, however, is the result of the wear and tear of an artery in spasm, resisting an increased pressure, and a late manifestation of hyperpiesis rather than a cause.

Kernohan, et al, at the Mayos and Horine and Weiss, have studied the arteries obtained by biopsy of skeletal muscle from a group of hypertensives and found that the degree of sclerosis roughly corresponds to the degree of retinal sclerosis determined by ophthalmoscopic examination. The arteries studied were all of arteriole size and they conclude that in late hypertension there is a general sclerosis of the arteries of the entire vascular system, a secondary rather than a primary manifestation.

That obesity and over-eating are important factors in the etiology is more definitely established. There is a definite step-like rise in the blood pressure with increasing obesity, and the percentage occurrence of hypertension is greater in the obese than in normal weight or malnutrition. Reduction of the weight is also frequently accompanied by a fall in blood pressure. It is to be remembered that obesity is an inherited trait.

That nervousness and emotional instability is an important factor in the etiology of hypertension is a fact granted by most students of this subject. Draper in his constitution studies has pointed out the type

of physical and mental makeup. Backer has discussed this point in detail, concluding that hypertension is a symptom, a manifestation of a certain abnormal type of constitution and "that one's constitution is his somatic fate predetermined by heritage."

Parker and Weiss have attempted to evaluate quantitatively the nervous manifestations in this group by detail tests of sympathetic nervous reactions, concluding that the influence of the parasympathetic system is less marked and of the sympathetic more marked in the hypertensive than in the control. Certain it is that these patients belong to the group of sympathicotonic personalities and that manifestations of this overactivity appear early in their life before any other evidence of disease may be noted.

O'Hare has presented this idea very clearly in a scheme as shown on the accompanying chart.

Period A represents the non-hypertensive state and continues from birth to 30 or 35 years of age. Heredity is the one known fact. In young life these individuals are high strung, nervous, worrying, with frequent nose bleeds, profuse menstruation, blush easily and manifest many other phenomena of vasomotor instability. Forty-five to fifty per cent of hypertensives manifest these early symptoms.

Period B represents the period of vasospasm with a fluctuating blood pressure sometimes above normal—frequently within normal limits. These people have a completely negative physical examination and manifest this disease only in their nervous symptoms and in the variations in the blood pressure. Towards the end of this period the tendency is for the blood pressure to become more frequently abnormal until period C is reached, the period of permanently elevated blood pressure, but even here variations in the pressure from hour to hour and day to day are always found. As a result of the long continued vasospasm and the associated increased cardiac force, we find first an evidence of blood vessel damage in the form of arteriole sclerosis. This is manifested in the eye ground vessels, varying in degree but a constant accompaniment of a

permanently elevated blood pressure. A second manifestation is found in hypertrophy of the heart. This is first seen as a thickening and blunting of the left ventricle but later a general cardiac enlargement is found. From this stage the disease may progress to several ends depending upon which organ is most severely damaged by the arteriole sclerosis. About 50 to 55 per cent manifest cardiac damage with congestive heart failure or angina. Another 35 to 40 per cent have cerebral hemorrhages; 10 per cent die of renal insufficiency (chronic nephritis), and a smaller per cent still of diabetes. Rarely is any one of these organs affected alone for all parts of the human system manifest the effects of damaged blood vessels, but usually the damage is more predominant in one or the other of the above groups. It is through this type of development that we find most of our cases of chronic nephritis with hypertension, especially in individuals over 40 years of age. However, nephritis with hypertension may develop as a residual of an acute toxic or infectious nephritis. The clinical picture in its fully developed stage shows all the manifestations of a nephritis developed through the essential hypertensive route with similar blood vessel damage except that the individuals are usually under 35 and the evidences of renal damage are more marked. The blood vessel damage is through the same process of vasomotor spasm as in essential hypertension.

In conclusion, hypertension is a disease of unknown etiology, characterized by a persistent elevation of the blood pressure. It may develop as a consequence of an acute nephritis or through the various stages suggested as the course of essential vascular hypertension. Heredity seems to be the most outstanding factor in the history of this group. A second important factor lies in the instability of the vasomotor system with the associated nervous phenomena—probably exaggerated in the ones who are overworked mentally and physically—overeating and obesity seem to have a definite relationship in the etiology. For other accused factors, such as glandular disturbances and the presence of chemical toxic substances in the blood, the evidence is suggestive but proof is lack-

ing. Such factors as hyperglycemia, excessive salt and protein in the diet, foci of infections and arteriosclerosis have been definitely shown to be unimportant. Arteriosclerosis is an important finding but is a result rather than a cause of hypertension.

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PATHOLOGY OF HYPERTENSION*

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The clinico-pathologic study of hypertension illustrates the observation that morbid changes are the result of disturbed functions as well as the cause. The vascular changes that are observed at necropsy are secondary to the hypertension, but these vascular changes in turn produce structural alterations in various organs, and the clinical picture of hypertension will vary according to the organ involved; and as Paullin has stated, the prognosis depends upon the integrity of the heart and the blood vessels. Moschowitz, from a study of the pulmonary arteries in cases of mitral stenosis, concludes that the vascular changes in hypertension are secondary to the hypertension, and this is caused by peripheral resistance. Fishberg also considers that the vascular changes are secondary to functional vaso-constriction and according to Bell and Clawson the additional strain induced by hypertension on the arterial system accelerates and intensifies arterial degeneration.

Although at necropsy hypertension is not an anatomic diagnosis, from pathologic study it is often possible to suspect and in most cases to establish the fact that hypertension was a pre-existing symptom. This has been our experience in the clinico-pathologic conferences that are held at the medical school. The changes which result from essential hypertension do not differ from those which result from secondary hypertension and the clinical diagnosis of primary hypertension can be approved by the pathologist only after careful histologic study. It is necessary to eliminate the causative factors, such as glomerulonephritis, toxemia of pregnancy, urinary obstruction, tumors of the suprarenal,

valvular disease of the heart, coarctation of the aorta, hyperthyroidism, and lead poisoning. The visceral changes that result from the vascular lesions of hypertension are observed more frequently and are more pronounced in essential hypertension. This is obvious because the causative factors of secondary hypertension are either removed, and the hypertension subsides, or the patient dies from the primary disease. Although the pathology of essential hypertension is not distinctive, by careful pathologic study, the clinical diagnosis can be confirmed at necropsy from the presence of hypertensive lesions and the absence of causative conditions.

The first changes to consider are the lesions of the vascular system that result from hypertension. The heart is usually hypertrophied, yet according to Bell and Clawson the presence of a small heart does not exclude hypertension, on the other hand the same observers think that idiopathic hypertrophy of the heart denotes hypertension. The occurrence and degree of cardiac hypertrophy depends upon the age of the individual, the general state of nourishment, the condition of the coronary arteries, and the duration of the hypertension. Cardiac hypertrophy is due to enlargement of the fibers and not to increase in number. The hypertrophy of the left ventricle always predominates and may be the only part of the heart to hypertrophy; but in patients who have suffered cardiac failure the walls of the other chambers may also hypertrophy.

With the possible exception of arteriosclerosis and medical hypertrophy of the small arteries, the arterial lesions are exaggerated morbid changes which are found in the aged and which are grouped under the term arteriosclerosis. In non-hypertensive cases these changes usually do not produce severe organic changes, except late in life and except when there are congenital anomalies present. In cases of congenital polycystic kidneys when arteriosclerosis makes its appearance in adult life, there may be produced a sequence of events that is indistinguishable from malignant hypertension.

I will describe separately the various lesions that are grouped together as arterio- and arteriosclerosis.

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Atherosclerosis is considered a lesion which results from stress and strain and is considered a degenerative change. It affects particularly the larger arteries. Irregular intimal fibrosis occurs and undergoes lipoidal degeneration and calcification and is accompanied by ischemic medial degeneration. In the aorta and its large branches it does not interfere with the blood supply but when arteries the size of the coronary and cerebral arteries are affected it may seriously narrow the lumen. Advanced atherosclerosis is frequently observed in hypertensive disease, even in children.

Monckeberg's sclerosis is a type of medial degeneration which is followed or accompanied by calcification of the media and it is most frequently observed in the aorta and the large arteries of the pelvis and lower limbs. This type is not accompanied by fibrosis of the intima. It is our observation that a simple medial degeneration, in some respects similar to this, is found in the small arteries of the brain and heart; this medial degeneration of the small vessels is not accompanied by calcification but in the arteries of the basal nuclei of the brain there is frequently seen iron infiltration of the media. This type of arteriosclerosis is probably a senile change due to the degeneration of the highly specialized elements of the arteries, that is the muscle and the elastic tissue. The arterial wall is thin, cloudy and the number of nuclei of the media is diminished. Such a change weakens the wall and may lead to rupture. We refer to this change in the small arteries as primary medial degeneration, to distinguish it from the ischemic medial degeneration which occurs secondarily to atherosclerosis. The Monckeberg's type with calcification is not found regularly in hypertensive cases, but the primary medial degeneration of small arteries of the brain and heart is observed frequently in cases of essential hypertension.

Hyperplastic elastic intimal thickening affects the smaller muscular arteries, especially those that terminate in the arterioles. The elastic tissue of the intima becomes hyperplastic and produces a thickening of the intima which narrows the lumen of the artery. This type of arteriosclerosis is commonly

followed by atherosclerosis. In hypertensive disease this change is pronounced, especially in the arteries of the kidney and when affecting the interlobular arteries and arteries of similar size it is included by some observers in the group of arteriolosclerosis. Muscular hypertrophy of the media is also seen in the small arteries and is sometimes associated with hyperplastic elastic intimal thickening.

The term arteriolosclerosis will only be applied to lesions that are found in the smallest arteries, the precapillary arteries. It is characterized by a deposition of hyaline material beneath the intima and later conversion of the wall of the arteriole into hyalin. In the kidney this change may extend from the afferent artery into the glomerular loops. Bell and Clawson think that this change, while not always present, is probably pathognomonic of hypertensive disease. In our experience a definite thickening of the wall of the arteriole is noted before the hyalin is deposited. Similar changes were noted by Kernohan et al in biopsy specimens of muscle that were removed from hypertensive cases, and they also noted endothelial proliferation. We have included this type of change in the group of arteriolosclerosis. Arteriolosclerosis is seen normally in the spleen, but when found in other organs, it is probably the pathognomonic lesion of hypertension. In hypertensive disease Fishberg and Murphey and Grill have observed arteriolosclerosis frequently in the kidneys, spleen, pancreas, liver, and brain. Acutely superimposed upon arteriolosclerosis is arteriolonecrosis, which is usually seen in the kidneys of the malignant type of essential hypertension. Arteriolosclerosis is demonstrated clinically in the retina; it is now generally agreed that the so-called albuminuric retinitis is due to hypertension and should be termed hypertensive retinopathy. O'Hare and Walker, Fishberg and Oppenheimer, and Moschowitz do not find albuminuric retinitis in the absence of hypertension.

The significant vascular lesions produced by hypertension are arteriolosclerosis and necrosis, medial hypertrophy of the smaller arteries, and an intensified hyperplastic elastic intimal thickening and atherosclerosis. And from our own observations there is

commonly observed primary medial degeneration of the small arteries.

The visceral changes that result from these vascular lesions determine the clinical course of the disease and the manner of exit of the patient. It is beyond the scope of this paper to present a detailed histologic picture of these various changes and only those of most importance will be briefly described. The most common lesions are observed in the heart, brain and kidneys.

In the heart, besides the hypertrophy, areas of fibrosis may be found in the myocardium. Such areas vary in size from microscopic lesions to relatively large healed infarcts. Clawson thinks that the fibrosis is always the result of a deficient blood supply, which is caused by the atherosclerosis of the coronary arteries. It is evident that the large fibrotic areas result from occlusion of an artery, but it is not definitely proven that the small lesions are similarly produced. The most frequent cause of death in essential hypertensive disease is congestive heart failure, and this is probably due to the inability of the heart to support the extra burden; because anatomic lesions to account for the failure are rarely found. As a result of cardiac failure there occur anasarca, ascites, hydrothorax and passive congestion of the viscera. A complete occlusion of a large branch of one of the coronary arteries may result either from thrombosis of the atherosclerosis vessel or from the progressive atherosclerosis process itself. This may prove rapidly fatal or the occlusion may produce a myocardial infarct. Bell and Clawson have observed that coronary atherosclerosis is more common and more pronounced in hypertensive than in non-hypertensive cases.

The common secondary lesion in the brain is cerebral hemorrhage, which occurs most frequently in the basal ganglia. Mention has been made of the common occurrence of atherosclerosis, arteriolosclerosis and primary medial degeneration of the arteries of the brain in cases of hypertension. Encephalomalacia of varying degrees results from these vascular lesions and it has been suggested that hemorrhage results because the antecedent encephalomalacia deprives the arteries of their usual support. Oppenheimer and Fishberg

observed cerebral anemia and sometimes edema in cases of hypertensive encephalopathy and they attribute the anemia to arterial spasms.

The kidneys exhibit histologic lesions in almost all cases of hypertension, but death from uremia in essential hypertension is not very common. When rapid renal insufficiency results in death, the term malignant hypertension is used, but according to Kernohan et al, Murphey, Grill, Klemperer and Otani, benign and malignant hypertension differ only in degree of involvement of the kidney. The vascular lesions cause atrophy and fibrosis which may ultimately result in the so-called primary contracted kidney. All stages from slight scarring to considerable induration may be seen, but in the uremic type diffuse glomerular lesions may result either before or after the occurrence of fibrosis. MacGregor has described three types of glomeruli in primary hypertension. (I) Non-hypertensive, some with diffuse or focal inflammatory changes. (II) Hypertensive glomeruli. (III) Hyaline glomeruli. Every uremic death was associated with inflammatory glomeruli. The hypertensive glomerulus is smaller than normal, the number of capillary loops is decreased, and there is uniform thickening and wrinkling of the basement membrane. The hyaline glomeruli result from atrophy or healing that follows inflammation. Keith et al also describe inflammatory lesions of the glomeruli in the malignant type of hypertension, and Klemperer and Otani ascribe these inflammatory changes to ischemia. Bell and Clawson have observed infarcted glomeruli which are associated with arteriolonecrosis. The tubules atrophy as a result of the atrophy of the corresponding glomerulus and also because of the diminished blood supply, and replacement fibrosis follows which in turn leads to contraction. The distribution of the fibrosis of the cortex correspond to the type of vascular atrophy. When a larger vessel is occluded the fibrosis is linear, and when atrophy is due to the occlusion of the afferent arterioles the fibrosis is patchy and irregular. It is not correct, however, to presuppose hypertension in all cases of primary contracted kidney as Mosch-

cowitz has pointed out that contracted kidneys may be found in the absence of pre-existing hypertension. An interesting change in the circulation is described by Gross who noted that in contracted kidneys, the medulla received a disproportionately large blood supply.

The changes in other organs are of less importance. Klemperer and Otani have observed multiple necroses in the spleen and pancreas, and we have also found areas of necrosis in the pancreas and would suggest a possible association of the arteriolar lesions with acute hemorrhagic pancreatitis. Several authors have suggested that the vascular changes in the pancreas may explain the frequent occurrence of diabetes in patients with hypertension.

An infrequent accident in hypertensive disease is rupture of the aorta. In one such case we noted arteriolosclerosis of the vasa-vasorum of the aorta and it was associated with considerable atherosclerosis of the aorta.

Summary

1. Pre-existing hypertension may be determined at necropsy.
2. The distinctive lesions are pronounced arteriosclerotic changes and arteriolosclerosis and sometimes arteriolonecrosis.
3. Visceral lesions, secondary to the vascular lesions are observed, and these explain the clinical course of the disease.
4. In the absence of hypertensive etiologic factors, the clinical diagnosis of essential hypertension may be confirmed.

J. H. Musser and D. O. Wright, New Orleans (Journal A. M. A., Aug. 5, 1933), present the average figures obtained from a group of thirty fat women who had an elevated blood pressure and hyperglycemia. This was done to determine whether their obesity was associated with the inability properly to utilize carbohydrate and to see whether there was any definite relationship between the hypertension and the sugar curve. It was found that all these patients exhibited a lowered tolerance to sugar. It would seem that there is a definite syndrome in which obesity, hypertension and hyperglycemia are associated, probably with ultimate arteriosclerosis. However, in respect to the latter, in no one of the authors' patients was arteriosclerosis clinically demonstrable. Many of the patients may have had arteriosclerosis due to the fact that their age was ten years greater than the control groups. It is rather difficult to conceive of pressures as high as some of the systolic and diastolic pressures in these women existing without a concomitant peripheral sclerosis. The authors cannot make a definite statement about the relation of the diminished sugar tolerance to hypertension either from the data of their studies or from a review of the work of others. The relationship of obesity to hyperglycemia is that the obese individual is much more likely to develop diabetes than is the thin person. It seems reasonable to assume that there is no one factor definitely responsible for the combination of obesity, hypertension and hyperglycemia unless it is obesity. The reduction in weight is often associated with a lowering of the blood pressure and a return of a sugar tolerance curve to normal.

SIGNS AND SYMPTOMS OF HYPERTENSION*

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Macon

A discussion of the signs and symptoms of hypertension leads one into many difficulties. The first of these is our knowledge that hypertension is itself a symptom and not a disease. Another is the belief shared by many that it has no characteristic symptom and only one certain sign, a high arterial pressure. Still another is the fact that many of the phenomena associated with increased pressure in the systemic arteries are due, not entirely to the hypertension, but in part to the co-existing vascular changes in various organs. So regularly are the two associated that a differentiation of the dysfunctions arising from their effects is impossible. Furthermore, each develops so insidiously that we cannot determine clinically, their inception, the threshold at which they produce symptoms or the beginning of serious secondary complications. It has, therefore, been necessary to limit the breadth of this discussion. In doing this I have attempted to avoid extremes. It is admitted that many of the signs and symptoms mentioned are not due to hypertension per se, but from frequency of association they cannot be omitted.

Those terminal complications, heart failure, apoplexy, chronic nephritis and uremia are excluded because after their advent the initial disorder is obscured. Myocardial insufficiency, by far the most frequent sequela, would alone provide subject matter for a symposium. My discussion is limited to that condition in which there is a persistent systolic or diastolic pressure alone or in combinations, high enough to endanger life.

With this concept clearly in mind we realize there can be no cardinal symptoms of hypertension. Indeed, the sphygmomanometer, a trained finger placed upon the radial pulse, or a stethoscope at the aortic area in the course of a routine physical examination, may reveal hypertension as an accidental finding long before the appearance of a symptom.

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At this point I wish to stress the importance of a detailed history. Since the treatment of the patient must focus upon the involved organs and the functional impairment peculiar to the individual, a careful history must be obtained to unmask disturbances in remote organs, so widespread are the vascular lesions.

The cardiac symptoms are most important because myocardial failure is the most frequent cause of death from hypertension. Palpitation of the heart, first on moderate exertion, increases until the patient may become conscious of the heart throb even when at rest. He may have observed a heaving precordial impulse or an increased apical thrust. Often there has been a sensation of pressure around or over the heart. Frequently a patient has been aware of skipping or fluttering of the heart. Rarely, pains simulating anginal attacks have been experienced. Dyspnea, provoked by decreasing amounts of physical exertion, heralds the approach of impending decompensation with orthopnea and dependent edema.

The nervous symptoms are numerous and may be either functional or arteriosclerotic. Of the former there may be restlessness, irritability of temper, emotional outbursts, depression, worry over minor situations, sleeplessness, giddiness, fatigue and headache.

The headaches vary in location and character. They may be due to diminished blood supply, to small hemorrhages or to increased pressure exerted by tortuous and dilated arteries. Their frequency, duration and severity vary. Janeway observed that often they begin in the early morning hours, waking the patient at about 5 a.m., and continuing for five or six hours and then ceasing only to reappear at the same hour the next morning. In some patients they come on suddenly and persist for several weeks and then disappear as mysteriously as they arrived. In others they may begin intermittently and increase in intensity and duration until they become almost unbearable and practically constant.

The cerebral arterial involvement may be localized or diffuse. Transient paralyses, loss of function, muscular twitchings or convulsions may occur. Angiospasms with palsies,

transient or permanent, are not uncommon. Motor aphasia, disturbances of vision of central origin, tinnitus aurium or Meniere's syndrome may occur. The higher functions, judgment, discrimination, attention or reasoning may become so impaired that the patient cannot continue in a position of trust and responsibility. Loss of memory, first for recent events, often is progressive. Hemiplegia may occur as the first warning of an existing hypertension. This may come suddenly or be preceded by several hours by any of the above symptoms. Hemiplegias due to angiospasms may disappear after a few hours and leave no residual signs.

Impairment of vision, sudden or progressive, may be due to retinal hemorrhages, sclerosis or angiospasms. Spontaneous epistaxis, regarded by some as characteristic when it occurs in an adult, demands a blood pressure determination. Paroxysmal dyspnea, nocturnal or diurnal, has been attributed to spasms in the smaller pulmonary vessels. In the intestinal tract flatulence, eructations, postprandial discomfort and constipation are encountered. Hemorrhages sometimes occur and there have been recorded the occurrence of pains simulating duodenal ulcer, lead colic and tabetic crises. Excessive uterine bleeding is not infrequent. This usually occurs after the menopause and must be differentiated from early malignancy. Urinary disturbances are rare and consist of slight nocturia and polyuria. Gross hematuria from the genito-urinary tract is exceedingly rare. Angiospasms in the extremities often causes intermittent claudications with extreme pain.

The signs of hypertension are fewer than the symptoms but more characteristic. First we have the relatively accurate mechanical measurement of the intra-arterial pressure. For this determination the mercury manometer is the standard. So important are the method and interpretation of this procedure that I cannot dismiss it without a few remarks. All are familiar with the instrument and the auscultatory method. It is the proper use of the cuff and the position of the stethoscope that are most important. One should be sure the rubber bag is at least 5 inches in width and long enough to com-

pletely encircle the arm. The outer cover of the bag must be inextensible. Of course there should be no leakage. The stethoscope should be placed one-half inch below the cuff, directly over the artery, and applied with gentle pressure. It is a mistake to place the flat Bowles type stethoscope under the cuff. In every instance the diastolic pressure should be recorded. It is now generally accepted that an increase in the diastolic pressure is more significant than a high systolic pressure. In no instance should a blood pressure determination be made before the patient has rested several minutes, either sitting or recumbent. Caution should be used in the interpretation of a high pressure at the initial examination. Some patients are under nervous tension at the time of their first visit to the physicians office and at subsequent visits a much lower reading may be obtained. The time of day, and the activities of the patient in the hours preceding the examination have an important relation to the pressure.

The general appearance of the patient usually reveals no more than a flushing of the face. On closer inspection prominent and tortuous superficial arteries may be observed. There may be prominent pulsations of the carotid arteries. The apical impulse may be diffuse and vigorous and frequently is displaced downward or outward. These signs are absent in the emphysematous chests and may be present in other conditions. On palpation a forceful precordial impulse is felt. Correct palpation of the radial pulse after much practice often enables the skilled physician to recognize an increased pressure. Enlargement of the heart due to hypertrophy and dilatation occurs if the tension remains high for a great length of time. Hypertrophy alone begins very early but may be concentric for a variable length of time. Enlargement may be detected early by teleorentgenograms or later by percussion. Auscultation may reveal an accentuated second sound at the aortic area but too much reliance cannot be placed upon this finding because not infrequently an increase is found when the pressure is normal and conversely a second sound of normal intensity is often found

when the pressure is very high. If dilatation has occurred relative insufficiency of the mitral or aortic valves gives rise to systolic and diastolic murmurs respectively at these areas. Irregularities of rhythm, extrasystoles, auricular fibrillation and flutter are easily recognized. Pulsus alternans may be detected by the palpating finger but more likely by the stethoscope while taking the pressure.

Changes in the retinal vessels are frequently found. The arteries may be contracted and tortuous. Obliteration of the lumen or periarteritis produce the silver wire appearance of the arteries. Small hemorrhages, recent or old may be found. The veins may show flattening, indentations at the arterial crossings or may be pushed aside by the arteries. These retinal signs are important as they give information on the possible duration of the hypertension. Unquestionably the ophthalmoscope should find more general use.

The laboratory is of little aid in diagnosing uncomplicated hypertension. The red cell count, hemoglobin and white cell count are normal. The urine shows nothing more than a slightly lowered specific gravity, a trace of albumin and a few hyaline casts.

DRAINAGE AND MALARIA CONTROL

In 1929 Dougherty County began the first county-wide malaria control ever attempted in this country. The Federal government stationed experts here for three years to record these control measures.

Much favorable publicity has resulted. Moreover, many counties in Georgia and other states have followed this excellent example. In fact, visitors from other states and foreign countries frequently pay visits to observe methods and records. Some have come from as far as Egypt, India and China. Thus history records the "Dougherty County Plan" and salutes a people who acknowledged fearlessly to the world that they had a problem and proceeded to do something about it. It was a hard fight that caused many to fear unfavorable results to both county and state. Such fears proved groundless, of course. Even tax objectors during a depression offer no complaints. The age-old evidence that it does good for communities as well as individuals to acknowledge sins again asserts itself.

It is still true that physicians have no right to make public ill of their private patients, but the reverse builds more virile and enlightened communities. Civilization will sometime declare it expedient to apply the same method to individuals.

J. A. REDFERN, M.D.

COMPLICATIONS OF HYPERTENSION*

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Augusta

It has been said that the symptomatology of hypertension is dependent on its complications. Any classification of these is somewhat empirical since they are effects or end results rather than complications in the usual sense. For clinical purposes the most logical grouping is that of Keith and his associates which is based on evidences of dysfunction of the organ or organs in which vascular failure occurs.

The cardiac effects of hypertension are of first importance because some 70 per cent of deaths in this disease are attributable to them. Some three-fourths of these cardiac deaths are from congestive heart failure, the remainder are due to so-called fatal angina pectoris and coronary occlusion. Heart failure can then be said to be inevitable in about half of all instances of hypertension. When one pictures the gradually enlarging heart working incessantly against the resistance of a narrowed vascular bed which has largely lost its capacity for reflex response to local circulatory requirements; and when one considers that the coronary circulation is probably as inelastic as that elsewhere it is surprising that cardiac death is not more frequent.

Heart failure commonly begins insidiously with mild dyspnea on exertion, perhaps a little dull precordial ache, then nocturnal paroxysms of shortness of breath which may progress to cardiac asthma. Breathlessness and cough gradually become persistent and in due time the evidences of right ventricular dilatation are added. Less commonly the overloaded heart collapses suddenly under some added physical or emotional strain or during an attack of nocturnal distress and the flooded lungs of acute left ventricular failure dominate the picture.

Much can be done toward the prevention or at least the deferring of myocardial failure if the patient can be trained to spare himself

every unnecessary demand on his cardiac reserve. Such training involves a high degree of cooperation and often a deliberate and systematic modification not only of daily routine but of mental outlook. The treatment of heart failure resulting from hypertension is not materially different from that of any other type except that results are apt to be slower of accomplishment and convalescence may be more prolonged. In many instances an attack of decompensation is actually helpful, the patient learns how to rest and the illness emphasizes as no amount of advice can do the necessity for voluntary relaxation.

Angina pectoris and coronary thrombosis occur in some 16 per cent of patients with hypertension. The angina presents the customary picture during attacks but more frequently leads to death from heart failure than in persons with relatively normal blood pressure. This raises the question whether the angina of hypertension may not be due more often to thrombosis of coronary twigs than to arteriolar spasm or other vascular dysfunction. Coronary occlusion occurs with relative frequency in this group with angina although hypertension per se in the absence of arteriosclerosis is not specially productive of the coronary syndrome.

The neurologic manifestations of hypertension are numerous and of all degrees of severity. Insomnia, irritability and modifications of personality may more properly be grouped with the symptoms than the effects of the disease but may constitute formidable complications. Hypothetically at least they may be due to local vasomotor dysfunction similar to that which produces gross cerebral symptoms. Ocular complications range from transient dimness of vision due in all likelihood to retinal arteriolar spasm to total blindness of an eye from extensive retinal hemorrhage or from thrombosis of the central artery. In between are all degrees of partial blindness due to multiple small hemorrhages or to retinitis.

Evanescent focal paralyses or even hemiplegias of a few minutes to a few hours duration and recurring epileptiform seizures form one of the most interesting groups of complications. It has long been a question

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whether these phenomena are due to cerebral angiospasm, to thrombosis of arterioles or to minute hemorrhages. All three causes are probably effective. It has been shown conclusively that the cerebral arterioles are capable of marked vasomotor response. When any great disproportion exists between cerebral arteriolar spasm and systemic blood pressure sufficient local ischemia may occur to produce unconsciousness or any of the focal or general signs of grave cerebral damage. If the paralysis disappears promptly leaving no residua whatever it is logical to assume that the episode is entirely functional. Not infrequently there is rapid but not prompt recovery from the major symptoms of apoplexy and slight paresis with spasticity persists for several days. Here there must be anatomic damage either from minute hemorrhages or from arteriolar thrombosis. Edema around the site or sites of injury probably explains the magnitude of the early symptoms while complete recovery can be attributed to the large potentiality for healing of minor injuries which the brain possesses. Angiospasm is doubtless the underlying cause of these transient hemorrhagic and thrombotic lesions. With persistent constriction of a sclerotic vessel the more degenerated portions may give way, when a vessel is not seriously diseased but spasm is persistent, thrombosis is the result.

Apoplexies which cripple or which kill occur somewhat more frequently in patients presenting the cerebral group of hypertensive symptoms. A great proportion of these major strokes are due to hemorrhage, thrombosis is relatively unusual, advanced arteriosclerosis is probably always a determining factor. Not infrequently the patient is conscious of definite prodromal symptoms. Severe headache, increased irritability or an almost insufferable sense of tension may precede a cerebral hemorrhage by days or even weeks. It is likely of course that the emotional outbursts and physical restlessness resulting from such sensations precipitate the accident. It seems probable that reasonable number of apoplexies might be postponed or even prevented by securing complete physical and mental rest immediately on the

development of exaggerated cerebral symptoms. Such complete rest requires the free use of sedatives and hypnotics, sometimes to the production of an actual twilight state. Not infrequently a patient emerges from a two- or three-day period of such therapeutic somnolence calm, refreshed and relaxed, even though no significant change in blood pressure has occurred. The restoration of confidence and equanimity accomplished by this relatively simple procedure is worth much.

The renal changes found in hypertension are still so much the subject of discussion that the physician is often at a loss to evaluate urinary findings and to correlate them with the clinical picture. Gross renal insufficiency with death in uremia occurs in somewhat less than 10 per cent of hypertensive patients, these almost always present the clinical syndrome of malignant hypertension and the pathologic finding of malignant arteriolar nephrosclerosis with hyalinization of glomeruli, necrosis of vasa efferentia and acute periarteritis. On the other hand the great group of patients presenting the clinical picture of benign hypertension, who die of heart failure, of cerebral accident or of some intercurrent infection after years of high blood pressure, show quite constantly the histologic picture of benign arteriolar nephrosclerosis with hyalinization of glomeruli and vasa afferentia. Clinical or chemical uremia is not seen in this group except as the result of a superimposed glomerulonephritis. In a very general way it may be said that in at least four-fifths of all cases of hypertension renal insufficiency plays no part in the termination of the disease. Throughout its course urinary excretion is abundant, the concentrating power of the kidney is not grossly impaired, the excretion of phenolsulphonaphthalein is normal or more than normal, a little albumin and a few casts may be found but no excess of red blood cells. The blood shows no retention of total non-protein nitrogen or of creatinine. As a terminal event renal function may be impaired from circulatory failure or a complicating nephritis. In the remaining fifth of cases in which symptoms are stormy and progressive and the duration of the disease is relatively brief,

renal function is disturbed almost from the start. The concentrating power of the kidney is poor, the excretion of phenolsulphonaphthalein is progressively diminished. Albumin is found in moderate amounts and at times, probably with the occurrence of hemorrhages in the renal substance, red blood cells are found, casts may be present in considerable numbers. The blood shows retention of non-protein nitrogen and of creatinine. Although heart failure or cerebral accident may be the terminal event uremia causes death in approximately half of this group and renal insufficiency is almost invariably an important contributing factor whatever the final picture may be.

Of the less important complications, hemorrhage is worthy of note, not as a frequent cause of death but as a source of consternation and uneasiness to the patient. Epistaxis is common and is frequently regarded by patient and doctor as a conservative phenomenon, a sort of safety valve. Pulmonary hemorrhage is infrequent, seldom serious in point of blood loss, but always dangerous from the likelihood of causing aspiration pneumonia. It may also give grounds for a diagnosis of pulmonary tuberculosis and the consequent apprehension may react disastrously on the patient. Gastric hemorrhage may be profuse and occasionally causes death, control may be exceedingly difficult and in any case organic disease of the stomach may be ruled out. Renal hemorrhage is most disturbing although loss of blood is seldom serious. Clots are apt to form in the kidney pelvis and resultant renal colic may seriously endanger the patient whose cardiac reserve is meager or whose cerebral vessels are near the breaking point.

It is to be emphasized that the treatment of the complications of hypertension is the management of the patient. Rest, reassurance and what has been termed progressive relaxation are essential. It is not sufficient to tell the patient to rest for a certain number of hours a day, he must be taught to inhibit voluntarily every unnecessary movement, to submerge every disturbing thought, to relax actively if such a paradox is permissible. Sedatives and hypnotics are most es-

sential at times for almost every patient. The major disasters are not to be escaped in our present state of knowledge and must be treated with courage and judgment when they come but they can be deferred for a while, often for a very long while, for the patient who is willing to be managed rather than treated.

TREATMENT OF HYPERTENSION*

THOS. J. CHARLTON, M.D.
Savannah

The therapy of hypertension is legion, running almost the whole gamut of medicine. This includes drugs, such as the nitrites, the iodides, the bromides, the barbiturates, benzyl benzoate, sulphocyanate: diets, salt poor and calcium high: mistletoe: extract of watermelon seed: diathermy: biologic extracts, such as liver extracts, corpus luteum: irradiation of suprarenal region: various kinds of baths: phlebotomy.

From this diversity it can be seen that there is no specific therapy. Now and then a new form of treatment appears, with all the necessary controls, charts, and figures, and specific claims are made for it. It becomes popular for a while and is then discarded.

One of the reasons there are so many forms of treatment is probably due to the fact that the symptoms of this condition respond very readily and satisfactorily to any form of treatment, provided it is treatment. I do not intend to imply that people suffering with this form of hypertension are neurotic. In the usual sense they are not. They are apt to be extroverts rather than introverts. They are the people whom we call "go getters," active keen, business and professional men and women, who are usually on the go. However, it might be that these people are neurotic as far as their vascular system is concerned.

Ayman endeavored to show that hypertensive patients often could be relieved by the idea alone that they were being treated. He wanted some therapeutic agent for the

*Read before the Medical Association of Georgia, Macon, May 11, 1933.

psychologic effect so chose dilute hydrochloric acid as he thought it was about as non-specific as any drug could be. He used as controls patients whose pressure had been found high on several occasions, at least five, and who had been observed over a certain period of time. Another history was taken and another physical examination was made to let them know that fresh interest was being taken in them. He then placed them on treatment consisting of a few drops of dilute hydrochloric acid. He sums up his work, "In a series of forty unselected hypertensive patients, seriously and enthusiastically treated by the daily administration of a few drops of dilute HCl, the symptoms were definitely improved in thirty-three, or 83 per cent. The symptoms associated with uncomplicated essential hypertension may frequently be relieved by the suggestion inherent in any seriously and enthusiastically prescribed drug or method of therapy. This is the probable explanation of many successes reported in the past."

Before treating a patient for hypertension, be sure that he has hypertension. One reading of the manometer with the mercury level above the normal limit does not make it such. Factors such as fright, excitement, exercise, all cause a physiologic rise in blood pressure, hence the pressure is varying throughout the day. The mere fact of consulting a doctor usually excites most people. Practically every intelligent patient, now, has at least a speaking acquaintance with blood pressure and is worried as to whether it be too high or too low. A second reading made ten minutes later will frequently show a drop of from ten to thirty points. Hence several readings taken at different times of the day should be taken for several days before a conclusion as to the state of that individual's pressure can be arrived at. One thing to be remembered is that this condition is subject to marked remissions. Also that with rest alone there is a tendency in most cases for the pressure to drop.

It is generally recognized that there is a familial predisposition in this disease. "Of the factors responsible for the development of arterial hypertension, constitutional pre-

disposition plays a dominating role in a large percentage of patients. The constitutional predisposition not only consists of inherited structural characteristics, but also manifests itself in certain functional reactions such as psychic hypersensitivity and excessive mental activity in the presence of inhibitions and fears, and occasionally in the abnormal functioning of the endocrine glands. Such a congenital constitutional predisposition may be considerably altered in later life by favorable or unfavorable surroundings, thus retarding or accelerating the clinical course of arterial hypertension." The modern trend of preventive medicine can in such cases be successfully applied, for the earlier hypertension is discovered and treated the more satisfactory are the results.

Most authorities on this subject who have not lost their perspective by over-enthusiasm agree that drugs per se have very little value over a period of time. It is well known that many drugs, such as the nitrites, will cause a reduction in pressure, but this reduction is only temporary and then the pressure returns to its former level. To meet some emergency, such as an attack of angina, there may be a definite need for a temporary reduction. Drugs are not needed in most cases except for their psychologic effect. Some patients who are nervous and apprehensive respond well to mild sedation. This is probably best obtained by one of the barbiturates.

It is of the utmost value for the doctor to gain the confidence of the patient because, here, much can be accomplished by psychotherapy. The patient should be given to understand that with proper treatment his case is not hopeless. In fact, uncomplicated hypertension and longevity are not incompatible. The importance of tranquillity, both of mind and body, should be impressed on the patient. The essentials of treatment can be summed up in the word *repose*, in its meaning, calmness of mind and its meaning, state of rest. It is a well-known fact that hypertension is practically unknown among the Chinese living in their own country. The reason for this is ascribed to their philosophy of life and mode of living rather than to any difference of food or climate.

Seldom, except in certain cases of malignant or complicated hypertension, is it necessary for a patient to become a complete invalid. A man who has worked all his life should retain enough work to keep him interested, but at the same time he should get rid of as much of the worry and strain as possible. He should get to his work a little later in the day, take a rest of several hours in the middle of the day, and if possible leave his work earlier in the afternoon. Occasionally a period of rest in bed for several weeks is indicated.

Exercise should not be prohibited. In fact, it should be encouraged, provided, of course, that the myocardial damage be not too great. It is advisable that the exercise be of a mild nature such as walking or a leisurely game of golf. Games that call for a sudden strain such as tennis should be interdicted. Different forms of warm baths and massages are beneficial.

Foci of infection, such as infected teeth, tonsils, prostate, should be cleared up on general principles, but as far as lowering the blood pressure is concerned, the results have been disappointing.

In the past it was thought that auto-intoxication or intestinal stasis was partly responsible for this condition, but now this is held to be untrue. Of course it is desirable to have a thorough daily evacuation of the bowels. This is best accomplished by the proper use of vegetables and fruits in the diet. If constipation exists, a laxative may be indicated, such as some form of mineral oil. A danger to be avoided is straining at stool with the possibility of rupture of a cerebral vessel. It is true that blood pressure can be reduced by the use of a saline cathartic or any other drastic purge with a resultant depletion of the body fluids, but the pressure will return to its former level as soon as more fluids have been absorbed. The daily use of these cathartics is to be condemned on account of their debilitating effect on the system.

In uncomplicated hypertension the diet should be a well-balanced one and it should be one that is palatable to the patient. Do not remind him three times a day that he

is an invalid. In the past it was customary to put the patient on a diet not containing enough protein to maintain the functions of life. Dr. Mosenthal says:

If this dietetic therapy is carried out it should be remembered that if a hypertensive or nephritic patient, or for that matter any human being, is given too little protein to eat, for a long time, he is prone to become weak and anemic, and because of the starches and fats which are substituted for the proteins he is likely to put on flesh and become obese. Therefore, it is possible that a good deal of harm may be done if a low protein high carbohydrate diet is carried out with too much enthusiasm. In fact, patients as well as normal persons do better if one errs in the opposite direction and gives too much protein food rather than too little. By restricting the protein in cardiorenal disease, one aims at controlling the hypertension and the pathologic processes in the kidney. Proteins in themselves will not increase blood pressure; there is ample demonstration of that contention. I am beginning to believe that larger amounts of protein than are ordinarily consumed by man will not damage the kidneys, even when nephritis is present. Patients live longer and are more vigorous with a rather high protein diet than with a low one, because they do not become anemic, they do not develop obesity, and their tissues maintain a better tone. Patients in whom the blood urea nitrogen is elevated, that is, those having a certain degree of renal insufficiency, apparently are not invalidated as readily if they are allowed a fair protein ration as if the nitrogen containing foods are interdicted entirely. This is a radical departure from the ideas of dietary therapy of cardiorenal disease which was present fifteen, ten, or even five years ago, but I believe it is the form of diet most observers interested in Bright's disease are advocating at the present time.

I believe that these patients should have four moderate meals a day rather than two or three heavy ones, so as not to throw too much strain at one time on the digestive system and hence on the heart. If the patient be obese, and they frequently are, it is advisable to have them reduce. This should be done gradually, not to such a degree as to weaken them. Loss of weight by itself will often cause a lowering of the pressure. The food should contain enough salt to be edible, but it should not be too highly seasoned. Allen has maintained that excessive

consumption of sodium chloride was responsible for hypertension, but other investigators have not been able to confirm this, and a salt-free diet works a great hardship on the patient. Fruits and vegetables should be used freely for their bulk and for their laxative qualities.

Summary

1. No specific form of therapy has been found up to the present time. Drugs are of value for their psychological effect, for a temporary lowering of pressure and for sedation.

2. Many forms of therapy will give symptomatic relief.

3. Be certain that your patient has hypertension.

4. If patient be obese, advise a gradual reduction of weight.

5. Allow a well-balanced diet with sufficient protein and sodium chloride.

Discussion of Symposium on Hypertension by Drs. Calhoun, Pund, Chrisman, Sydenstricker, and Charlton

DR. CHARLES C. HINTON, Macon: When five papers have been read in a symposium of this kind, it doesn't leave very much to be said by those who are discussing it.

Under the heading of etiology, Weiss claims that hypertension is of a dominant Mendelian character, and under Draper's definition of "constitution", we find, "the aggregate of hereditary characters, influenced more or less by environment, which determines the individual's reaction, successful or unsuccessful, to the stress of environment." Zimmerman and Alvarez, in pursuing this line, said that both sexes inherited equally, but that women were protected by the ovaries until the menopause, and then they showed the same effect.

Alvarez and Stanley, in studying prisoners and guards, reached the conclusion that neither age, dissipation, drugs nor syphilis played any part in hypertension, but that excitement, strain, work and obesity were important factors.

Dr. Chrisman called attention to the taking of blood pressure, and there are one or two things that might be mentioned here. The auscultatory gap offers a definite opportunity of missing the discovery of a hypertension. I had a patient who had a gap of 20 mm., and on the first occasion that I took his pressure I pumped the machine up only to enter the gap, the systolic pressure was 200, when I thought it was 140. The variations of blood pressure have already been mentioned. Mueller and Brown say that a normal patient will have a variation of as much as 30 mm. after a period of 25 minutes' rest, and very frequently a

variation of 40 mm. in 24 hours, and hypertensives may vary as much as 120 mm. in 24 hours. The difference in the two arms offers an opportunity of missing the discovery. This may be due to anatomical abnormalities, due to congenital differences in the blood vessels, or to atheromatous patches at the mouths of subclavians, to aneurysm, to mediastinal tumor, to cervical rib, or to trauma. Any of these may cause you, when taking blood pressure in the arm that has the lower pressure, to fail to discover it.

Under the heading of treatment, of course it is absolutely necessary that we know as nearly as we can the etiology of the hypertension, and the symptoms and complications, before we can treat rationally. An English physician, Dickinson, made the epigrammatic statement that the greatest danger of hypertension was that some fool would discover it and try to treat it. As with all epigrams this one gives food for thought but can not be taken literally. Treatment must be directed at the cause if possible and the creation of a hypertension phobia must be avoided.

DR. STEVE P. KENYON, Dawson: I want to congratulate the essayists, individually and collectively, on their splendid papers. They have presented the present-day knowledge of hypertension so well that there is little left to discuss. Hypertension is the outstanding hazard to the thinker of today, and because of that fact, no subject has been more exhaustively studied.

We will agree on the heredity, and also do we concur in the fact that secondarily the sympathetic nervous system is the motive force that causes the changes in the peripheral vessels. But no one, in my humble opinion, has isolated the substance or substances responsible for the stimulation of the medulla. Until this primary factor, whether a glandular dysfunction, a chemical toxic substance, the absence of some unknown vitamin, or whether due to a virus or bacteria, is discovered, we as medical and scientific men, advisers of this unfortunate group, will continue to run around in circles in our prevention and treatment of this condition.

I disagree with Dr. Calhoun about the high fatality in the negro group. In my experience, nature compensates their mental and economic depravity by increasing their natural resistance to the fatal complications. Here it is that we see natural bloodletting through the nose, the lungs, and other mucous membranes. And how often do we see negroes live on and on, in spite of a very high systolic and diastolic pressure.

As to treatment, we agree that in the thinkers of the world, the men who carry the physical, the economic and the political problems of the world on their minds, do we find the highest incidence of hypertension. In my group of cases are 20 per cent of deaths among men and less than 5 per cent among women. Therefore, it seems to me that the most important thing in the treatment is to lessen, and, if possible, stop this strain on the brain and body structure, and try to

make these patients live as God in His wisdom intended them to live.

Rest, then, both mental and physical, heads the list of therapeutic measures. This is accomplished by the use of psychology and the sedative drugs. I think the bromide group heads the list of drugs that give us rest in these particular cases.

I am glad to see the profession agreeing that diet does not influence essential hypertension. The work that Dr. Charlton reports in the use of hydrochloric acid is very interesting. I trust that it is a good therapeutic measure that we have been grasping for.

DR. HENRY C. SAULS, Atlanta: There is no subject that should be more interesting to us than hypertension when you consider the incidence of this disease. The statistics of several life insurance companies show that in early adult life approximately 2 per cent of the individuals examined have hypertension. As you go up the scale it increases very rapidly. One person in five lives to the age of 45. From 45 on the prevalence of hypertension rapidly increases. It is stated that 60 per cent of the deaths in the registration area of the United States are due wholly or in part to hypertension. The annual death rate from hypertension and its associated conditions in the registration area of the United States is approximately 140,000.

Clinically we can divide cases of hypertension into one of three groups. In the first group are those cases which present a relatively high systolic pressure and a comparatively low diastolic pressure. This group comprises only a small percentage of cases that are due to such conditions as hyperthyroidism, aortic regurgitation and heart block. The second group of cases are those in which there is a high systolic pressure and a high diastolic pressure, and comprises the largest number of cases, the essential hypertensive group. Third, a small group of cases, approximately 4 per cent, in which there is a high diastolic pressure and a low systolic pressure, thought to be due to myocardial weakness.

The termination or the course of these patients is also very interesting. Sixty per cent of them terminate in or develop predominating symptoms of heart disease. Twenty per cent show evidence of brain lesions as predominating symptoms and in approximately 10 per cent the most outstanding terminal lesion is one of nephritis. I think that in the past we have too often tried to explain an existing nephritis as being the cause of the hypertension instead of the nephritis being due to the hypertension. With a complete history, a thorough physical examination and the laboratory examinations as indicated in each particular case one can classify them fairly accurately. This will enable us better to outline a course of treatment for each individual case and to anticipate the future developments.

As regards the treatment of hypertension we must treat not only the disease but the patient. An analysis of his home life, his work, and any psychic dis-

turbance that may be present must always be taken into consideration in outlining the treatment. You have all been asked the question "Is my blood pressure too high?" Of course that depends entirely on the conditions that exist, namely, cardiac hypertrophy, the condition of the kidneys and the resulting changes that have taken place in the blood vessels. You can tell some what their blood pressure is. Others you cannot.

Drugs, other than the nitrites, the depressors and the sedatives, have little effect on this disease. Diet, as has been shown, is not as essential as it was thought to be. A hypertensive should have a well-balanced maintenance diet to prevent an anemia. It is known that obesity is a very frequent accompaniment of hypertension. Usually with increased obesity we have increased blood pressure. We want to keep these people as near a normal weight as possible. Rest with periods of relaxation is essential in treating hypertension. It is helpful when possible for the patient to get one or two hours of rest after the noonday meal. The "New Deal" should help the hypertensive patient. It is a known fact that women, due to their ability to rest more, can stand hypertension better than men. A period of one or two weeks of bed rest is essential in these cases at times.

DR. JAMES E. PAULLIN, Atlanta: We should feel highly complimented in having presented to us such an excellent series of papers on the subject of hypertension. For many years hypertension has afforded me a great deal of interest, and many hours of pleasure in studying its development, its pathology, its symptomatology, its prognosis and treatment.

Your attention has already been directed, by the various essayists, to the importance of knowing whether the person who consults you has a true hypertension. There are many conditions, such as emotional states, associated with an increase in the blood pressure above normal, but this is a temporary condition and removal of the exciting cause relieves the hypertension.

When it is determined that hypertension exists, then it behooves one to determine insofar as possible what damage has been done; has arteriosclerosis developed and if so, has it caused changes either in the heart, the central nervous system or the kidneys. It is believed that more people who have hypertension die of other diseases than as a result of hypertension. The complication causing the greatest number of deaths is myocardial failure; the next in order of importance is a cerebral accident (hemorrhage, thrombosis, etc.); third is renal failure. The latter causes fewer deaths than either of the others.

In the great majority of patients, at the time of their first visit, it is impossible to predicate which, if any, of the complications will ultimately cause the end; as the patient is followed from year to year, certain symptoms and signs will sooner or later make their appearance and from these one is enabled to form an idea of where the greatest damage is taking

place. To bear this in mind is of importance in that it gives us an opportunity through various therapeutic procedures to obviate, or at least guide the individual away from the expected result and prolong life in greater peace and comfort.

In no disease is it of greater importance to study the personality of the patient. It is necessary to know what kind of an individual he is; how does he react to the emotional stress and strain of life, will he be able to adjust himself with equanimity to an altered mode of living, thinking and acting. Upon this a great deal depends for it is always quite true that there are many, many times that we can do little or nothing for the hypertension but there is rarely a time that we cannot do a great deal for the patient.

DR. STEWART ROBERTS, Atlanta: This is a very interesting subject, about which we know very little. I have enjoyed these papers. I think the symposium was beautifully planned.

Dr. Calhoun is finding, contrary to our previous feelings in the matter, a good deal of hypertension in the negro. It is the urban negro, and not altogether the Ethiopian characteristic of the pure African. Whether urban life and the mixture of races influences the situation, I know not.

I am particularly interested in the treatment of high blood pressure. There are two divisions which we have long accepted: First, ordinarily mild hypertension; and, second, malignant hypertension. For malignant, in my own experience, very little can be done. They go gradually, with all that we can do, to a natural death. It is very surprising to feel that probably 70 to 80 per cent of cases of high blood pressure in the southern states end in congestive heart failure. For the country as a whole, 65 per cent is given. We have so little acute rheumatic fever in the south, and so little vascular syphilis outside of the cities, that the majority of hypertensive cases, and the majority of our heart disease, results in congestive heart failure.

May I suggest two or three drugs. There is no perfect drug for it. In my own experience, erythrol tetranitrate, a fourth of a grain once daily, is very welcome. The English seem to take a half grain, but I do not think our Americans tolerate the larger doses. Theominal is very good, or better still, a half a grain of phenobarbital once, twice or thrice daily.

Dr. Calhoun referred, in the etiology, to nervous causes or psychogenic causes. May I suggest one rule which I try to use with all our patients not dependent upon other factors: Smooth the outflow of the personality. Become smooth personally. Grow old a little gracefully. Be a little more calm, less worried. How much, ultimately, of our essential hypertension we shall find to be due to nervous and mental causes, I do not know. Remember Dr. Houston's discovery, that the Chinese very, very rarely have hypertension. We Americans are very nervous, and certainly hypertension, coronary disease, anginal states, coronary thromboses, are increasing rapidly in

the four great countries of the world, Germany, France, England and the United States.

DR. G. S. MURRAY, Columbus: I should like to ask one question with regard to the treatment of hypertension and to make one observation on the whole day's program. The question I wish to ask is what results the writers have had in their use of chloral hydrate.

We have had today a paper on chronic arthritis, a symposium on hypertension, and between those two we have had a paper and a very free discussion on the economic changes in the medical profession, leaving the impression that the general practitioner would soon be a thing of the past. The chief points brought out in the discussion on arthritis and hypertension have been the facts that we still have a great deal to learn about those conditions and that the chief difficulty in regard to them consists not in the diagnosis but in the minute details of treatment. You have only got to think of this last point to realize that in the many thousands of cases of arthritis and hypertension it is not the consultant who will successfully or unsuccessfully treat these cases but the family physician who, after all, is the only man in intimate daily contact with these cases. It, therefore, seems to me that the one economic lesson from today's scientific program is that the family physician is and always will be the keystone.

DR. L. MINOR BLACKFORD, Atlanta (Closing for Dr. Abner W. Calhoun): If I may pinch-hit for Dr. Calhoun: A few years ago Dr. Paullin with Dr. Bowcock and Dr. Wood got out a clinical study of 500 cases of hypertension in private practice, which has been quoted around the world. Dr. Calhoun has been interested in this subject for a number of years. He and Dr. Hugh Wood are working out a similar series of 500 colored patients at the Grady. That is nearing completion, and he has more than abundant grounds for believing that hypertension is very serious in the negro. It may be that the urban negro is subjected to a greater stress than the one with a small farm in the country. I don't know why it is so common or serious, but one who has worked at the Grady Hospital knows that it is. It may be because so many negroes are afraid of the evil eye, and all sorts of other things, which don't enter the consciousness of those of us who have had better educational facilities. I can assure Dr. Kenyon that Dr. Calhoun has abundant proof for what he said about hypertension in the negroes of Atlanta.

DR. EDGAR P. PUND, Augusta: I wish to emphasize the fact that, in primary hypertension, the pathologic changes that are found at necropsy are secondary to the hypertension.

DR. JAMES E. PAULLIN, Atlanta (Closing for Dr. V. P. Sydenstricker): Dr. Sydenstricker asked me to close. I will tell you this one thing in closing the argument for him. He said, "I will tell you this: That the majority of patients with hyperten-

sion worry the life out of you to know the blood pressure, particularly women. When you take it, you usually see that the mouths are getting ready to ask you, 'How much is the blood pressure?' A very good friend of mine, who is a very prominent cardiologist in San Francisco, said he had a delightful way of obviating that. Just as he pumps up the blood pressure machine, and he sees they are getting ready to ask how much the blood pressure is, he suddenly releases the cuff, and the pressure escapes and makes a whizzing kind of noise, and he says, 'How are your bowels today?'"

ATROPHY OF LIVER IN CHILDREN*

THOS. BOLLING GAY, M.D.

Atlanta

Clinical and Pathological Picture:

Atrophy or necrosis of the liver occurs in an acute form, a subacute form, a chronic or healing stage, and probably a healed stage.

The acute form is rapidly fatal. It is characterized by intense jaundice and rapid diminution in size of the liver. Microscopically, destruction of the liver cells totally or in part is seen.

The subacute form is more apt to be found in children. The clinical picture of this form is recognizable but somewhat indefinite. Sluggishness, anorexia, vomiting, and either obstinate constipation or diarrhea are early symptoms. Thirst is usually pronounced. Jaundice ranges from a slight staining of the skin and sclerotics to a deep orange-tinted icterus. Jaundice may not be present at all. The stools contain bile and bile occurs at times in the vomitus. Typical biliary colic is not found but vague abdominal discomfort is present. Sometimes pain or abdominal tenderness is marked. A peculiar pungent fetid breath is usually noticeable. The liver is usually decreasing in size as the jaundice increases, contrary to the picture of obstructive jaundice. The spleen is often enlarged due to proliferation of connective tissue. Ascites occurs in one-third of the cases. The child may be drowsy to the point of coma and at times suffer from intense excitement.

The liver seen at operation differs in appearance from that seen at autopsy. During life, filled with blood, it is much larger, firmer, and lacks the flabby consistency and

shrivelled appearance seen after death. At operation the nodules of spared liver substance protrude above the regions in which the liver cells have been killed. The liver looks disorganized with yellowish and reddish areas scattered about on its nodular, irregular surface.

Microscopically there are evidences that an extensive cytolytic process has taken place destroying the greater part of the hepatic cells and bringing the hepatic stroma into prominence. A disorganized liver is left in which there is only partial preservation of the parenchyma.

Death may occur after a period of months or the process may subside into the chronic stage.

The chronic stage, microscopically, is characterized by progressive shrinkage of the dismantled hepatic stroma and regeneration rather than regressive changes of the parenchyma. Through the liver substance, where the lobules and all except an occasional hepatic cell has been destroyed, the framework remains intact with the bile ducts and blood vessels. Bile duct sprouts may be seen growing out into the old framework and where groups of liver cells have been spared new liver tissue is formed from these cells by their multiplication by division.

In the latter part of the chronic stage, well defined nodular cirrhosis appears. This is the end stage, or stage of healing, of acute atrophy of the liver which Mallory has designated "toxic cirrhosis."

Life Expectancy: Judd and Beaver¹ in a study of twenty-two cases give the average life expectancy of their combined series of acute, subacute and chronic cases as fifteen weeks.

Incidence: The condition is comparatively rare. Sowles² reports that from 1894 to 1927 out of 200,000 admissions to the Massachusetts General Hospital, twenty cases occurred, or one to every 10,000 cases. The condition is more prevalent in females. A great many cases have now been recorded in children, but the condition occurs more often after the age of thirty.

Etiology: A study of the reports of the condition in children reveals a striking lack of unanimity of opinion about possible

*Read before the Medical Association of Georgia, Macon, May 11, 1933.

causes and in individual cases there is more often a negative history than any suggestive fact of etiology. Children are not subject to most of the causes reported for adults, such as cinchophen, chloroform, mercury, arsenicals, phosphorus, trinitrotoluene, trinitrophenol, chlorethane, dinitrobenzene, aspidium, lupine, toxins, amanita phalloides toxin, carbon tetrachloride, toxic hyperthyroid states, toxins of pregnancy, bacterial toxins, alcohol in large quantities, cystine, and hemoagglutinative serums.

The pathologic picture in cases of different causation is similar. Most cases develop without adequate etiologic explanation. After their study Judd and Beaver conclude that it is apparent from a careful analysis of cases especially those due to known agents that in addition to the toxic factor, some fundamental unknown constitutional state, perhaps transient and of metabolic character, also enters into the etiology and pathogenesis. This view is held by Wells³, Fisher⁴, Umber⁵ and a number of others.

In experimentally produced hepatic necrosis, Opie and Alford⁶, Graham⁷, Davis and Whipple⁸, and Simmonds⁹ have shown that the available dextrose and the hepatic glycogen afford considerable protection to the liver against injury. They have also shown that regeneration progresses more favorably when carbohydrate is abundantly supplied in the diet. This may in part explain the varying degrees of susceptibility that patients exhibit.

Case Report

A little girl, ten months of age, seen recently gives a typical picture of the disease as it has been reported in children. A more nearly complete study has been made of this case. The child seemed a normal breast-fed baby during early infancy. A picture at five months reveals a healthy looking infant.

She was brought to see me for the first time at the age of ten months. The mother complained that her relatives felt the child was sluggish as compared to her previous activity. Examination at this time revealed nothing abnormal. She was breast-fed and her diet in other respects suitable for her age. No treatment was advised.

One month later the patient was again brought to the office. This time because a protrusion had been noted in the upper mid-abdomen and because her eyes had a yellowish tint. The liver edge blunt, firm and nodular was felt six centimeters below the costal margin. The spleen was palpated three centi-

meters below the costal margin. The yellowish tint of the eyes was not definite. The temperature was normal. Stools were of normal color. The child since birth had had four to five yellow, soft stools a day.

Laboratory Findings: The blood picture was normal. Malarial studies were negative. Blood Wassermann on mother and child were negative. Tuberculin test was negative. Stools contained bile and no parasites were found. Urine was normal. No specific search for leucine and tyrosine crystals were made, but they have been noted in so many conditions as to make their presence of no significance. X-ray of chest and abdomen and barium enema revealed nothing except to confirm the size of the liver.

Course: The abdomen became progressively distended with fluid during a period of four days. The superficial veins became prominent over the lower chest and upper abdomen. The child became stuporous and at times fretful as though in pain. The temperature gradually rose and on the fifth day was 104 degrees F. The leukocyte count rose to 23,000. The stools became watery and increased in number but retained their yellow color.

Operation: Dr. Grove, who had seen the child in consultation, with my approval, decided to explore the abdomen. We expected to find a malignant growth of the liver or kidney, but wanted to be sure we were not dealing with an abscess. After a quantity of clear yellowish fluid poured out, the liver presented itself as a large, irregular, nodular mass. It was colored in spots liver red and in other regions a mixture of yellow and red. Streaks of bright yellow ran between these areas. A section removed from the firm edge showed diffuse necrosis of liver cells with scar tissue infiltration.

Postoperative: The child seemed more comfortable for a while after the operation. Bright red blood was noticed in two stools on the fourth day, but was not observed later. The abdominal wound healed nicely but the general condition became progressively worse during the next two weeks. A picture taken at this time shows the state of nutrition and the anxious expression of the face. A secondary anemia had developed. Hemoglobin was 40 per cent. The red cell count was 3,800,000. The spleen was no longer palpable. The liver had not grown larger. The abdomen was distended with fluid to the point of embarrassing respiration. Paracentesis was performed and 1,900 c.c. of clear yellow fluid resembling urine was removed.

The specific gravity of the fluid was 1.015. The reaction was alkaline. The globulin test was strongly positive. Smear of the sediment gave a differential count of polynuclear cells 48, small lymphocytes 42, endothelial cells 10. Culture of the fluid was negative. An injected guinea pig suffered no ill effects.

The child became comatose and died nine weeks after the onset of the first symptoms.

Autopsy Report: The liver weighs 550 grams. It is of a light yellow color with a slight greenish tinge.

The surface of the liver shows a diffuse irregularity. There are roughened, elevated nodes with intervening smooth areas. It cuts as of leathery consistency. There is diffuse fibrous scarring on cut sections.

Microscopically there is diffuse destruction of liver cells with fatty infiltration and proliferation of bile ducts.

Diagnosis: Subacute stage of yellow atrophy.

Pictures were taken of the organs by Dr. Hoppe at autopsy. They show the color and the nodular appearance of the liver. The picture of the cut section was taken after fixing with formaldehyde.

A fruitless effort was made to trace a source of a poison which might have served as an etiological agent. The child had not been ill prior to its fatal illness.

Family History: It is interesting that liver disturbances and enlarged spleens were characteristic of the maternal side of the family. The maternal great-grandmother, her brother, and two of her sisters were jaundiced and had enlarged livers and spleens during their final illnesses. The maternal great-grandmother died at sixty-seven years. The physician who operated upon her brother a short time before his death stated that he had a cancerous liver and an enlarged spleen. The maternal grandmother has been informed by her physician that she is suffering from hardening of the liver. The patient was the third child of normal parents. The first child died at twenty-one months after an illness of three days. This illness was said to be intestinal intoxication. The second child is living and well at the age of nine years.

Comment

The extreme youth of the patient and the lack of jaundice were misleading. The youngest case I found reported was that described by Langley Porter¹⁰ in a child two weeks of age. This child died at the age of five months. Chisholm¹¹ has studied eight cases and reported one of his own. The age incidence of his group was three to ten years. Gregory¹² reported one case eight months of age and another two years of age. Most of the cases reported have suffered from digestive disturbances, chiefly diarrhea. Each writer seems at a loss to account for a causative agent.

Treatment is symptomatic. The introduction of large amounts of glucose is suggested by the experimental work on animals.

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Discussion on Paper of Dr. Thos. Bolling Gay

DR. R. CULLEN GOOLSBY, JR., Macon: Some writers refer to this condition as subacute cirrhosis but subacute diffuse necrosis would be a more descriptive term. The case reports of subacute atrophy in the literature are fewer than the reports of acute diffuse necrosis although there is no doubt that the latter is the rarer disease during childhood. Chisholm explains this anomaly by stating that the clinical picture of the subacute form is not clear-cut, that the symptoms are vague and difficult to interpret and that at times the diagnosis may not be arrived at until autopsy. Children may be attacked at any age. The youngest case reported was in an infant two weeks old. Jaundice was the only striking symptom; nutrition and development were normal although it was noted that the spleen and liver were enlarged at the third month. The baby's stools were always yellow and the fats ingested with the food were split and utilized. In the last week of life ascites and intense respiratory distress developed. The baby died at 5 months.

At autopsy the liver was found to be very small and stained dark green. The microscope revealed complete absence of normal tissue. Immediately beneath the capsule there was a zone containing many nodules separated from one another by fibrous tissue containing large cells resembling liver cells. In the new formed tissue separating these nodules were many recent pseudo bile ducts which had no communication with the interlobular ducts nor with the remnants of liver cells scattered thru new formed interstitial tissue. No effort at regeneration of the necrosed liver tissue was evident. In some cases necrosis and regeneration go hand and hand so that one part of the same liver may appear cirrhotic and another necrotic.

As the pathologic, so may the clinical findings vary. Jaundice is the one symptom that is always present, persistent and progressive. Ascites has occurred in about one-third of the reported cases and when present is a terminal event. Enlargement of the liver is found early in the disease and later gives way to a diminution in volume. The spleen frequently hypertrophies. Severe vomiting is sometimes found but is not a constant feature. Anorexia and thirst are usually encountered. Stools may be pale or perfectly normal. Pain in the abdomen is usually present but is intermittent. Fever is absent. The presence of leucine and tyrosine in the urine, so frequent a finding in acute yellow atrophy, has never been demonstrated in the subacute form. This fact together with the chronicity of the latter condition is of value in differentiation of the two forms. Cirrhosis of the liver may be easily confused with the slowly pro-

gressive forms of subacute atrophy. Here, the diagnosis must rest upon the presence of an intense and increasing jaundice and the alteration in size of the liver from the primary hypertrophy to the terminal atrophy. To separate the icterus of catarrhal jaundice from that of subacute atrophy will be difficult until time for adequate observation has elapsed. Then, the differentiation will rest upon the persistence of the icterus, its intensity and the increasing malaise of the severer malady. A few victims of the disease recover spontaneously. The indications for treatment are few. There may be need to meet the water loss; this is best done by hypodermoclysis or proctoclysis of normal salt solution or Ringers solution and a 4 per cent glucose solution may be given intravenously.

DR. LON GROVE, Atlanta: I probably voice the sentiment of this meeting in describing this as one of the most interesting cases presented before the Association in a long time. It is the first case of the kind we have seen.

There were two or three very confusing things about this case. First of all, the enlargement of the liver, which did not click without previous ideas of atrophy. Second, that the child was not jaundiced, and there was abdominal fluid. In the last two years we have seen three cases of acute yellow atrophy of the liver. The first case was a woman who came down with intense jaundice, a small liver, with the history of taking atophan for weeks. This was a typical case. She lived only a few days. The next case was a woman in the thirties, who was more like this one. She came down with jaundice of a comparatively low grade, with rapid loss in weight, mental dullness and ascites. She was explored, as this child was. The liver was small and shrunken, not nodular as this case. In reviewing the cases reported by Pool, Whipple and Judd, we find that Pool and Whipple explored all of their cases, and Judd explored a large per cent of his cases. They are explored for fear that we may be overlooking some form of obstructive jaundice or inflammatory disease that might be benefited by surgery.

This brings us to the discussion of the differential diagnosis between obstructive and non-obstructive jaundice. Unfortunately, we are still a long way from being able to make a diagnosis in a very large per cent of cases. The various tests have been more or less disappointing. At first we thought the direct and indirect van den Bergh might be of great help. It has been of little help to us. So we are back where we were several years ago. We have to take a careful history on these cases. If there is a history of gallbladder disease, with jaundice, we immediately think of obstruction in the common duct due to a stone, while if the patient is in the cancer age, with a slow, progressive jaundice, which is more or less painless, and there is loss of weight, we immediately think of a carcinoma at the head of the pancreas or chronic pancreatitis. These cases should be explored

surgically, because if the obstruction is due to chronic pancreatitis and the bile is short circuited into the stomach, the patient remains well. We have had two cases.

Lahey has suggested the use of an indwelling duodenal tube. This is put down and allowed to remain over a period of twelve to twenty-four hours. If during that time there is any bile collected, even though a slight amount, we are led to believe that the jaundice is probably non-obstructive or due to a ball-valve stone, while if no bile is collected, we suspect an obstructive jaundice due to a benign or malignant tumor in the duct or at the head of the pancreas. This probably is as practical and reliable a test as any. Even though we make use of all the available diagnostic methods, the differential diagnosis between obstructive and non-obstructive jaundice is at times very difficult, and an exploratory operation may have to be resorted to.

DR. J. G. GAY, Atlanta: I should like to emphasize the diet in the treatment of these cases. I had occasion, during the experimental and surgical study on some 200 animals, to destroy two-thirds of the liver. We were able to keep them alive over a period of three to four months, and sometimes for a period of a year, with a high carbohydrate diet. We were able to induce ascites by feeding them on a high protein diet, and able to reduce the amount of ascites by using a carbohydrate diet. We were able to produce experimentally these reactions which I believe suggest a rational dietetic treatment.

DR. THOMAS BOLLING GAY, Atlanta: I believe this condition can be recognized clinically if we are on the lookout for it. The early use of intravenous glucose and a high carbohydrate diet might prevent some of the deaths.

"CANCER CURES"

Dr. F. J. Cullen, Chief of Drug Control of the Federal Food and Drug Administration, states that "Cancer can not be treated successfully or cured by any medicine or drug preparation". He announces that the government has recently seized stocks of "Mixer's Cancer and Scrofula Syrup". The syrup was shipped by the Mixer Medicine Company of Hastings, Mich., and was falsely labeled as to the merit of the concoction in the treatment of cancer. A prosecution against the manufacturer is now pending.

"Quacks who prey upon sufferers from cancer through the sale of misbranded fake medicines are inevitably subject to legal action under the national pure food and drug law. Mixer's nostrum is composed essentially of potassium iodide, extract of plant drugs, including a laxative drug, sugar, alcohol, water, and a methyl salicylate flavor. The 'cure' was grossly misbranded in that the labels carried the statements as to the syrup remedial value in the treatment of cancer, as well as a score or more of other maladies, including all 'blood diseases' abscesses, goiter, and cancerous tumor".

OFFICE TREATMENT OF GONORRHEA*

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Atlanta

No disease is so peculiarly adapted to office treatment as gonorrhea. Only there can the facilities for its management be conveniently arranged and efficiently employed. Except in rare instances, gonorrheal patients are ambulatory, which enables them to visit the office, thus allowing the urologist to conserve his time and render service under optimum conditions.

The importance of daily observation and treatment of gonorrhea by the physician cannot be over emphasized. The fact that the symptoms of the disease and condition of the patient can change so quickly, frequently necessitating immediate change or even omission of treatment, renders the daily office visit virtually indispensable at least during the acute stage. Besides the inexperienced efforts of the patient at administering local applications cannot substitute for the skillful technic of the physician. These facts were emphasized by results obtained in 1000 consecutive private patients whose case records were recently studied by the writer. It was found that cases treated regularly at the office were cured within an average of eight weeks, while those who for one reason or another visited the office irregularly were treated for an average of fifteen weeks. Infected urethral glands, posterior extension, and epididymitis were twice as prevalent, and stricture three times as frequent in the cases who did most of the treatment themselves and visited the office occasionally. It is also noticeable that patients who see their physician daily co-operate better probably because of an idea that the doctor has some mysterious faculty of knowing when they have dissipated.

The treatment of gonorrhea in the office is not merely a mechanical and routine procedure. It has a social and psychological aspect, probably unparalleled in any other disease. The patient too frequently is not

merely suffering from a disease, but he also has a domestic or social problem. Thirty per cent of our series of cases were married. Many of them had already exposed their wife, or someone else to the infection during the incubation period. The patient frequently looks to the doctor to help him out of his embarrassing muddle. This situation requires good judgment and tact on the part of the physician. Advice should be aimed at protecting the innocent, and preserving domestic harmony as well. The mental reaction of the patient must be carefully studied. Without proper enlightenment from the physician a certain type of individual might consider suicide as the only way out of his predicament.

Too frequently useless penalties are imposed on gonorrheal patients. For an instance, students at boarding schools or academies are sent home if found to be suffering from a Neisserian infection. With ordinary precaution against spread of the disease which is always impressed upon the patient by the physician and with co-operation on the part of authorities, the patient could continue his studies and be successfully treated without endangering anyone with whom he comes in contact. Gonorrheal ophthalmia is the bugbear, when as a matter of fact, it is extremely rare. We have seen only one case in our private practice during the last seven years and this was an out-of-town patient, who exhibited the complication on his first visit.

To obtain co-operation, the doctor must study his patient's mental attitude very closely. The over-conscientious individual frequently abuses himself mentally for having a disease which he does not realize is so popular. This type of individual requires reassurance that his condition is not serious and that recovery will be rapid and absolute. The opposite is true with reference to the indifferent type of individual. He must be constantly impressed as to the seriousness of the disease and its consequences.

Education of the public on the subject of gonorrhea is most effective through patients who are properly treated in the office. The fear of being exposed through the physician's

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report to some public bureau and the dread of being hurt by instruments are responsible for so many patients going to drug stores and quacks for assistance. Correction of these erroneous ideas will do much to help us in our effort to get patients to their physician when they first notice evidence of the disease.

The diagnosis should be certain before commencing treatment even if several smears and two or three days are required. Without the use of the microscope we would undoubtedly treat many patients for gonorrhea who did not have it. Several conditions such as simple urethritis, non-venereal prostatitis, urethral stricture, and chancre in the meatus produce a discharge simulating early gonorrhea.

To the average patient a urethral discharge means gonorrhea and it is often necessary to use a convincing argument to keep him satisfied while withholding treatment and establishing a diagnosis.

The treatment of gonorrhea might be considered under three general headings, namely; general management of the patient, internal medication and local treatment.

The management of gonorrhea described here will, of course, have to be brief and is merely offered as the procedure which has given best results in our hands, and not as the best or only successful method.

On the first visit, the patient is given a general examination to discover any systemic disorder or co-existing disease that might influence the course of gonorrhea. Anemia, for an instance, will prolong the infection and if the patient is informed of this fact at the beginning, he will be more content through the long and trying disease. Dr. Emery regards the patient's resistance of such importance that he states he has never cured an anemic patient of gonorrhea.

Our general instructions to the patient are few and simple. Alcoholic and carbonated drinks are prohibited. Only foods highly seasoned with irritating condiments are omitted from the diet. The patient is cautioned to have at least one bowel movement daily, even if laxatives are required. Sexual indulgence is advised against in an effort to prevent trauma to the diseased organ as

well as to prevent spread of the disease. Plenty of sleep and rest are recommended. Avoidance of violent and unnecessary exercise is insisted upon. We endeavor to keep our patients engaged in their usual occupation, however, hard work undoubtedly interferes with progress and tends toward chronic gonorrhea and complications. As shown in our series of cases, desk workers were well within an average of sixteen days shorter period than the patients who did reasonably hard work, and besides they suffered considerably fewer complications. Following this policy our patients lost on an average of less than one-half day each, from their work during an attack of gonorrhea.

One of the most trying things in connection with treating gonorrhea is answering questions concerning the length of time necessary to cure each and every case. The patients ask, "How long will it take me to get well, and will I have a swollen testicle or stricture?" Venturing an answer is nothing more than a guess or, in common language, is putting your neck out. Still the patient has to be satisfied after a fashion. The best solution of this is an explanation of the variability of the course of gonorrhea and the many factors that influence it. It might be well to state the average duration of the disease in those patients who commenced treatment at the same stage as the patient in question. In our series of cases the condition of the urine on the first visit was the best guide as to the probable duration of the infection and likelihood of complications.

Those patients who commenced treatment very early when the first urine was clear or just hazy were cured within an average of thirty-seven days, those who exhibited the first urine cloudy and second clear were cured within an average of seventy-three days, and those showing both glasses cloudy were treated for an average of one hundred days. Complications were almost nil in the first group, fairly frequent in the second group, and quite frequent in the third. Explaining these facts to the patient who has neglected treatment for several days, and letting him know that his case is likely to be more severe than the average, will usually insure his

co-operation and endurance throughout the course of a tiresome treatment.

There are many drugs used internally in the treatment of gonorrhea, but it is doubtful if any of them are of appreciable benefit except those used to relieve some painful symptom.

Urinary antiseptics have very little if any influence on a purely gonorrhea infection. In mixed infections and painful involvement of the deep urethra and bladder neck, methylene blue seems to abate the symptoms and at least produce a good psychological effect. In some instances pyridium or serenium seem to aid in controlling the infection.

Alkalies should be employed if the urine is irritating due to acidity. Sodium bicarbonate is the drug of choice for this purpose.

The balsamics are widely used but as generally prescribed there is no reasonable explanation of how or why they should be of benefit. We prescribe sandalwood oil, probably from habit, however, we think it has a beneficial effect upon the urethral mucosa.

Anodynes undoubtedly have a place in the relief of painful urination. The time-honored prescription of potassium citrate, tincture of hyoscyamus, and sanmetto is probably as good as anything else in this instance.

The drugs most frequently used locally are the organic silver compounds such as argyrol, silvol, neosilvol, and protargol, the dyes such as acriflavine and mercurochrome, potassium permanganate, silver nitrate, boric acid and astringents, such as zinc sulphate.

The organic silver compounds are the safest drugs for anterior injection. They kill the gonococci and are soothing to the inflamed mucosa. We employ argyrol in a 10 per cent solution at the office, as an anterior injection. When home treatment is necessary we prescribe neosilvol in a 5 per cent or 10 per cent solution or protargol in a $\frac{1}{4}$ to a $\frac{1}{2}$ of 1 per cent solution, because they do not have the staining properties of argyrol or silvol. Acriflavine is an injection to be used only by the physician. It undoubtedly has great penetrating power, but at the same time produces painless irritation, frequently resulting in chronic urethritis

or stricture. Properly administered, however, in a 1-3000 to a 1-1000 solution, it is undoubtedly one of our best drugs for treating gonorrhea. Mercurochrome also has irritating properties frequently producing pain after a few days use, but it has doubtless been used in too strong solution or administered too frequently. Potassium permanganate is unquestionably our safest and most reliable drug for irrigating. It is used in both acute and chronic stages of gonorrhea in solutions of from 1-5000 to 1-3000. Silver nitrate in 1-10,000 solution is widely used as an irrigation. We employ it in chronic urethritis where an astringent drug or stimulating treatment is indicated. Boric acid solution is very soothing and useful in allaying painful urination and frequency associated with very acute posterior urethritis and prostatitis. The astringents should only be used in chronic catarrhal urethritis after the gonococci have disappeared. We employ the following prescription, zinc sulphate grains XV, Lloyd's colorless fluid hydrastis one ounce, and water to make eight ounces to be injected twice daily.

It is evident from the vast number and variety of agents used by different urologists with virtually the same results that the selection of a particular drug is not of the utmost importance. The strength of the solution used and the technic of administration are the things to consider. They either determine success or failure of treatment according to the experience and skill of the physician.

There are many agents such as vaccine and non-specific proteins used in an effort to build up anti-bodies in the patient's blood and increase his resistance to the infection. Theoretically these preparations should increase the patient's ability to throw off the disease and they are probably worth employing in many instances. In very virulent infections and in troublesome complications we employ gonococcus combined vaccine in increasing doses at two-day intervals until six or more injections have been given, or one of the non-specific protein preparations such as omnadin or lactigen at two-day intervals until five or six doses are given. These agents should be employed as an aid only and not

as a substitute for the usual local treatment and too pronounced results should not be expected from their use.

We will give you a brief outline of our usual treatment of gonorrhea. The word routine was purposely not used because the management of each case is individual and deviations from the usual are frequently necessary.

The most important single thing to remember in the treatment of gonorrhea is gentleness in every phase of technic. Learn to fear trauma which is the cause of practically every case of chronic urethritis, and most complications. Too much force in making anterior injections or irrigating frequently results in posterior extension or infected urethral glands. Lack of the proper touch in passage of sounds and in massaging the prostate accounts for many cases of epididymitis.

When the early acute case of gonorrheal urethritis is diagnosed, the patient passes the urine in two glasses. This is done on each visit to the office. Nothing gives the doctor more correct information about the location and severity of the infection than the two glass method of inspecting the urine. If the first glass only contains pus we know that the pathology is confined to the anterior urethra and our effort should be to control the infection before it has a chance to spread to the deep urethra. The patient is told to drink water freely for the first few days and urinate more often than usual to promote better drainage. Sandalwood oil capsules minims V one 3 times a day after meals are prescribed for the first week or two. Two to six cubic centimeters of a freshly made 10 per cent solution of argyrol are injected into the anterior urethra twice daily at the office for two or three days. A $\frac{1}{4}$ ounce aseptic bulb syringe is used and only very gentle pressure exerted. The injection is stopped at the first suggestion of painful distention even if only two or three cubic centimeters of the solution have been injected. During the first two or three days the patient is shown the technic of making an injection. During this time the acute inflammation abates somewhat and the patient is less apt to traumatize the mucosa when he begins making injections himself.

About the third day the patient is given a prescription for a bulb syringe like we use in the office and sufficient 10 per cent solution of neosilvol to last several days. He is told to inject the syringe half full of the solution morning and evening, and retain it for two or three minutes. The excess neosilvol is allowed to escape slowly and the patient avoids urinating for an hour or two afterwards. When the home injections are instituted the patient comes to the office only once daily, about noon for observation and the argyrol injection. In a considerable number of early cases the urine becomes perfectly clear and remains so in from a few days to three weeks. If the urine remains clear after passage of a sound and the prostatic fluid is normal two weeks after omission of treatment the patient is dismissed as cured.

This gratifying result is often referred to as aborting the infection. Credit however, should be given the patient's exceptional immunity or resistance to gonorrhea and very little acclaim given the physician's skill or method of treatment. We believe the above method of treatment will produce as many early cures as the most drastic efforts to abort the disease. The majority of attempts to abort the infection fail and the case too frequently goes into chronic gonorrhea or some complication.

After the acute symptoms subside and the infection appears controlled, that is, after all pain has gone and the urine is clear except for shreds in the first glass, a daily irrigation of potassium permanganate 1-5000 is substituted for the argyrol injection at the office. The fluid is allowed to flow in very slowly and is stopped if it produces pain. If too much pain is produced or the urine looks worse after the first irrigation it is stopped and the argyrol injection resumed for several days. Protargol $\frac{1}{4}$ to $\frac{1}{2}$ of 1 per cent solution might be substituted for the neosilvol as the patient's home injection, when the early acute symptoms subside. The urine will clear up in the majority of cases and the patient is well in from 6 to 8 weeks. Then the prostatic fluid is examined and a sound passed. If the urine remains clear and the prostatic fluid is normal after an observation period of

two weeks the patient is dismissed as cured.

Failure of the urine to clear within this period of time is the signal for further investigation. If the meatus is abnormally small a meatotomy admitting a 32 F. sound is done. Then the urethra is examined for stricture and infected urethral glands. Stricture or even granulations causing only a slight thickening of the mucosa can be felt with a bulbous bougie. Infected follicles and glands can be felt by palpating against the sound in the urethra. The prostate is massaged and the fluid examined for pus in the wet smear and gonococci in the stained smear. These examinations should not be delayed because the above mentioned conditions will not respond to medication alone. As soon as progress seems unsatisfactory the cause should be looked for and corrected.

If stricture is present gentle dilatation by sounding every third or fourth day will correct it. The urethra should be dilated up to its normal size usually twenty-eight F to thirty-two F. For this purpose sounds seem more effective than the Kollman dilator. If infected urethral glands are found the large ones are incised as soon as pus forms, and the sinuses irrigated daily with mercurochrome, argyrol or acriflavine using a hypodermic syringe and blunt needle.

The small shot-like follicles are treated by dilatation and gentle massage against a sound held in the urethra. The infected prostate is massaged every third or fourth day. During treatment for all of these complications the patient should have a daily irrigation of potassium permanganate.

Chronic urethritis and prostatitis usually occur together and are treated by sounding twice a week and massaging the prostate twice a week on separate days with irrigations of potassium permanganate. If the discharge persists after the prostate is free of infection and the urethra fully dilated an endoscopic examination should be made for abnormalities of the urethra and chronic inflammation of the verumontanum. Abnormalities are dealt with surgically as indicated where granulations of the mucosa are found in the deep urethra or the verumontanum is inflamed silver nitrate 4 to 10 per cent should

be applied through the endoscope or about fifteen minims of a 1 per cent silver nitrate solution introduced through a Bangs syringe sound about twice a week until the condition is corrected. When the patient is apparently well except for a few shreads in the urine and discharge in the morning, it is well to employ an astringent injection twice daily. This usually stops the morning drop and shreads within a week and the case is dismissed.

Posterior urethritis and prostatitis are treated by daily through and through irrigations of potassium permanganate with prostatic massage twice weekly. If the irrigations cause pain it is well to use argyrol installations in the deep urethra and bladder or irrigate with a warm solution of boric acid. When there is painful urination and frequency it is well to restrict the intake of fluids and give an anodyne in an effort to put the acutely inflamed part at rest as much as possible. As soon as the pain and acute symptoms subside, massaging and irrigating are resumed until the urine is clear and the prostate free of infection.

Prostatic abscess is one of the most painful complications of gonorrhea. It is treated by hot sits baths and giving morphine for pain and anodynes to lessen irritation about the bladder neck. When there is retention of urine the patient should be catheterized twice daily and argyrol solution left in the bladder and urethra. Very warm irrigations of boric acid solution frequently make the patient more comfortable. As soon as fluctuation begins gentle massage and irrigations are commenced. Vaccine in increasing doses or non-specific protein injections seem to benefit some cases, and at least make the patient feel that something is being done for him. Fortunately prostatic abscess is not frequent. It occurred in less than 1 per cent of patients in our series of cases.

Epididymitis occurs in about 5 per cent or less of private patients. It is usually the result of dissipation on the part of the patient, or trauma in improper treatment. The case is managed by omission of local treatment during the period of pain and tenderness, rest in bed, and immobilization of the

scrotum by means of a bellvue bandage or a suspensory. Vaccine or non-specific protein injections are worth trying. After the acute stage has passed local treatments are resumed very cautiously and pursued until the prostate and urine are free from infection. Epididymotomy has been rarely performed in our practice. It is only done when a point of fluctuation can be found or in troublesome recurrent cases and occasionally in an extremely violent case.

Gonorrheal arthritis occurs in about 2 per cent of cases and is one of the worst complications of gonorrhea. It is treated by morphine for pain and completely fixing the affected joints by means of a plaster of paris cast. The cast is kept on until the acute inflammation in the joint subsides, usually from two to three weeks. At that time the cast is removed and function in the part restored by baking and suitable manipulation of the affected joints. Treatment of the gonorrhea proper should be continued, of course, with special attention given foci, such as the infected prostate and urethral glands.

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HEADACHE FROM MEDICAL ASPECT*

HARRY AINSWORTH, M.D.
Thomasville

Headache has probably been in existence as long as man. The first presumptive evidence is in the ninth chapter of Genesis: "And Noah began to be a husbandman, and planted a vineyard, and he drank of the wine, and was drunken, and Noah awoke from his wine and knew what his younger son had done unto him, and he said: 'cursed be Canaan, a servant of servants shall he be unto his brethren!'" This cursing would certainly suggest the morning after headache, and the headache must have been severe, as there is no further evidence of any over-in-

dulgence by Noah, though he lived three hundred and thirty-five years after that.

The commonest causes of headaches are poisons set free in our bodies manufactured by the growth of germs, which the body defence mechanisms are too weak to resist, or by a disturbance of normal physiology and chemistry of the body, which may result from overtire and the bad use of our bodies.

Two parts of the brain are chiefly concerned with headache; i. e., the optic thalamus, and a considerable area of the cerebral cortex. The optic thalamus, the terminal point of the different paths, is especially important. It also contains a mass of grey matter which forms a center for certain elements of sensation, more particularly those capable of evoking pleasure and consciousness of change of state and discomfort. The dura, covering the base of the skull, contains more nerve fibers than of the vault. This dura, when placed under tension is very sensitive. Intracranial pressure increases in many acute infectious diseases such as pneumonia, scarlet fever, influenza, typhoid. This is especially true of pneumonia in its early stages, before the physical signs suggest a pulmonary lesion. Symptoms of meningeal irritation may be so pronounced that a diagnosis of meningitis may be considered until spinal puncture reveals normal fluid.

There are headaches that are characteristic symptoms of certain germ invasions. That of variola is severe and situated just back of the eyes. Typhus fever produces a frontal headache that is worse at night, and is with difficulty relieved. Headaches that accompany many other fevers are easy of diagnosis.

The headache following spinal puncture has received much consideration, and many explanations are offered. Following spinal puncture, there are many instances of continued leakage through the hole produced by the needle in the dura. This reduces the cushion of spinal fluid below the tentorium, putting it on a stretch, thus producing the pain.

Oedema of the brain caused by trauma to the skull, as in concussion and fractures (not depressed) are relieved by intravenous

*Read before the Thomas County Medical Society, Thomasville, June 16, 1933.

injections of 200 c.c. of a twenty-five per cent solution of Dextrose and with absolute rest in bed.

In the case of headaches not accompanying acute fibril conditions, a careful history taking is of great value particularly in regard to habits, occupation, past diseases, hereditary influences. Of habits, inquire when and what the patient eats. What does he drink? What drugs does he take? The nature of the occupation, with habits of work may disclose over fatigue or exposure to poisonous substances, such as noxious gases from factories or garages. Is the lighting efficient? Is the work unpleasant to the individual? Under past history, there should be interrogation concerning syphilis, meningitis, sunstroke, and past injuries to head. Migraine is the only headache that has definite hereditary aspect. Constipation is a most frequent source of headache. The evacuations may be daily, but are they complete?

Psychoneurotic headache, under conditions of maladjustment, have been recognized by students of human nature for ages. In 1692 Aphra Behn referred to this feminine foible whereby escape was gained from unpleasant duties. Balzac refers to the "infinite resources" employed by wives. Headache may be the only symptom of psychoneurosis, or it may be one of many. Some observers believe that the majority of headaches met with in practice are of this nature. The pain may be described as excruciating, but objective evidence of suffering may be absent. She may be in a darkened room, cold cloths on head, smelling salts in hand, and a picture of misery. Emotional disturbances or annoying circumstances of any kind, precipitate, or aggravate an attack.

Migraine or hemicrania investigations affirm that fifty per cent of migraine is hereditary, and that seventy per cent of these is transmitted through the mother. Of prime importance is the age of the patient. Adolescence ushering it in, and from the age of thirty-five on, it lessens and never lasts beyond the climacteric, and indeed during pregnancy and lactation, migraine usually ceases. Gastro intestinal disturbances bear the brunt of causality. Fatigue

is a potent cause. Physically the adrenals are largely engaged in the exhaustive process and the blood sugar diminishes as they are gradually depleted of adrenalin. Muscular activity becomes less and the blood pressure falls, but other organs may substitute for the adrenals. The thyroid, and the pituitary by overactivity maintain blood pressure, provided the liver is not exhausted of its glycogen. This hyperpituitary activity will in many cases bring on migraine.

Headaches during intense and acute psychosexual excitement points directly to pituitary body as the source. Frequently without known cause the attack sets in, usually as a mild pressure sensation in some part of the skull at the site of the temple, but deeply seated, and gradually extends until the entire head is involved. In the headache, nausea and vomiting are foremost symptoms. Frequently the attack ceases after vomiting.

There are as many treatments suggested as there are drugs in the pharmacopedia, and their efficacy is in inverse proportion to their number. It is obvious in the first place that all errors of living must be corrected. Normal, well balanced meals, sufficient rest and sleep, avoidance of all activities that lower vitality, and are conducive to fatigue both mental and physical, should be recommended. The treatment of various toxic conditions, especially of local source, in the teeth, tonsils, sinuses, intestinal tract should be instituted. Complete blood sugar analysis should be made.

Malaria, syphilis, tuberculosis, and other systemic diseases require special attention. Correction of pelvic abnormalities may be necessary. For the attack itself, condeine in one grain doses by hypodermic is the best.

While making a study of headaches which had been treated in the past six years with the roentgen rays and glandular extracts, Beulah Cushman, Chicago (Journal A. M. A., Sept. 9, 1933), noticed that the similarities of the visual field were strikingly alike. In a few cases in which correction of the refractive error did not relieve the cephalalgia, a study made with the aid of the internist, the roentgenologist and visual fields led to the belief that these headaches are of pituitary origin. From this study, the author concludes that certain periodic attacks of headaches and discomfort of the eyes simulating ciliary spasm may be due to dysfunction of the organically sound pituitary gland or to distention of its capsule by physiologic hypertrophy. The majority of the visual fields show a contraction of the superior temporal quadrant for color and varying changes in the form fields.

THE JOURNAL

OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

NOVEMBER, 1933

THE MEDICAL PROFESSION AND THE PUBLIC

The medical student is taught throughout college days that the practice of medicine is not primarily a money making occupation. For some reason the public has taken the opposite viewpoint. For a period the effect of this teaching lies quiescent due to the struggle for existence. By and by, it is no longer necessary to devote his entire time to the "bread line," thus giving time for reflection, when the desires of helping the helpless come forward as a result of ideals forcibly presented in his impressionable student days. This brings the realization that even in a large private practice only a small per cent of the people can be reached. The advantage of public health and preventive medicine for the masses appear quite clear to him before the public catches his vision. He should help to mould opinion in his community, patiently explaining that the benefits offered through various agencies are for the underprivileged.

Moreover, he should not fail to invite his private patients to come regularly to him for vaccinations, physical examinations and other preventive measures. These are his rights and duties, offered to him first of all. It has been neglected so long until the public has almost forgotten that the physician has an individual interest that is personal as well as professional. To confirm this, let his childhood family physician pass in review and note his kindly affectionate interest, which kindled respect and love for him that has benefited as much, perhaps, as the professional services rendered. Let him strive to keep up with the progress of medicine in order that he may do great good to all classes in his community. In so doing, development of the heart is equally as important as development of the hand.

J. A. REDFEARN, M.D.

A PLEA FOR NEIGHBORLINESS

The old-fashioned virtues are returning to favor. The old-fashioned words are heard again in our ears. The chief executive of the nation has issued a plea for neighborliness, as part of the American spirit of the pioneer on which he has called.

And I, in my turn venture to make a plea for this same old-fashioned trait—why, in the old days it would not have been considered a virtue, it was just a simple human trait—of neighborliness. My appeal is made to the physicians of my state. Let us realize that we are neighbors. What makes a neighbor? Common interests, common fears, common hopes, common duties, welfare dependent on the same conditions. All these are ours. What is owing between neighbors? To join one another in effort. To stand by one another in trouble. To know one another. And, if any way possible, to like one another.

He has not the spirit of neighborliness who is unwilling to go a few steps out of his way to greet a neighbor. He does not know neighborliness who finds it pleasanter to blame than to praise, to distrust than to trust his neighbor. In these days the homely trait of neighborliness has been in most of us so overgrown by the ranker vegetation of individualistic virtue and competitive efforts that it may be difficult to discover it in our temperamental make-up. But it is there; we have inherited it, along with courage and with faith.

The JOURNAL would like to record the scientific work of Georgia doctors. It earnestly requests, therefore, that each physician in the State who publishes a contribution in some other medical periodical submit an abstract of the article for these columns.

And let me impress it upon you that it is rapidly going to become the fashionable virtue. The man who remains standing alone is going to be left behind. The man who thinks he can walk alone is going to find himself outstripped by those who recognize their interdependence, who are willing to give and to take in their work and their experience. The man who is going ahead in

the new era, who is going to prosper in it and be happy, is the man who takes his neighbor's hand and joins heartily with him in their common interests.

In this spirit, as your neighbor, I extend my hand to you, to every ethical physician in the state of Georgia, and ask you to come in with us, now. Come into your county society, and thence to our state Association. It is the time to come. Work with us and let us work with you. We have things to offer you, practical things, things that, in reality, you cannot afford to be without. We offer you defense in suits for malpractice, and you, as well as I, know that such suits are becoming more numerous every year and are an everpresent source of grave pecuniary as well as professional danger to every physician. This is a risk that no physician, whoever he may be, can afford to take alone. We offer a monthly Journal of the first class, in which you will find the news of your neighbors' doings, news of their medical experiences and discussions of their professional problems. The fact that these experiences and problems were met and solved by your neighbors, working under conditions similar to those in which you work, gives them not only a special interest but a special value for you. We are doing the best we can to make our Association useful in various ways to our members. We could do more if you would join us and give us your suggestions and help.

Let me say again: We have come out of an era of sophistication into an era of simplicity. We have come out of an era of "hardboiledness" into an era of sincerity. And, above all, we have come out of an era of walking single-file, in which advantage meant getting in front of somebody else, into an era in which progress will be made by walking shoulder to shoulder, with faith in our fellowmen, trust in our neighbor.

Come in to the Medical Association of Georgia and join efforts with us and let us join efforts with you. Together let us learn—and practice—the meaning of neighborliness.

Eastman.

J. COX WALL, M.D.

THE BEGINNING OF END RESULTS OF THE ECONOMIC DEPRESSION IN MEDICAL PRACTICE

It is generally conceded that the body politic has been more profoundly affected by the recent economic crisis than that furnished by any period of history of the nation and the etiology, prognosis and treatment offered by "brain trusts," commissions, etc., remain subjudice. In the words of Job they "are all physicians of no value."

In the matter of economic rehabilitation of medical practice a statement of problems and methods of reconstruction must proceed from within the profession and can be built temporarily on two unchanging basic principles. First, the importance of painstaking scientific services individually rendered primarily and second, a remaining sense of appreciation and gratitude that subsists in the majority of our clientele. Our medical colleges for years have been training graduates for such services but does the rank and file of such graduates live up to such training? This can be answered by asking another question: Why do many competent physicians sell their microscopes and send patients miles for a blood count while waiting to be able to employ a technician? I once heard a man who generally would be called a success say that when collections were poor he or his associates would take a post graduate study and attempt more intensive methods in practice.

The old type of family physician gave his patients a greater percent of what medical science had to offer than is now given by his successors. One of the most difficult tasks that all of us have is trying to live down lax methods. We older men can learn much from young practitioners who pick up our shop-worn clientele and with greater interest and more intensive methods improve such patients and gain a degree of livelihood; for a spirit of traditional medical altruism frequently evolves a surprising degree of appreciation and gratitude—a sine qua non of successful practice.

There are about as many theories for the rehabilitation of medical economics as in the various industries and pending the evolution of such theories into practical methods medi-

cal practice should adhere to basic principles. Traditional conservatism is now needed more than ever. So far as the bogey of state medicine is concerned it will remain a theory for the present generation because nearly all time-honored state functions have floundered in this crisis and for that reason there is little hope of success for any innovations in state offices and furthermore a new generation of patients will require to grow that will be satisfied with such an impersonal service even though efficiently rendered. It had been hoped in times of prosperity that group practice methods would lead to the establishment of new ideals as to scientific efficiency and a better economic adjustment but that hope has been abandoned and we now seem to be reverting to individualism in which future policies must be projected.

The question of how to give a patient efficient services on a compensating basis commensurate with their ability to pay parallels the problem of industry in giving the laborer a comfortable living wage along with a legitimate profit for the manufacturer. In the absence of any blanket method each individual case will require to be handled on its own merits. It has been my observation that with those who have been accustomed to efforts of economic independence rarely suffer an irreparable financial shock from sickness and those of the indolent class are either outright charity or else are far from adopting any kind of means for anticipating such a calamity. It seems that the attending physician is too often unnecessarily made the victim of extorted sympathy so far as finances are concerned as evidenced by the subsequent history of such cases. Cases of appendicitis decline advice for operation for economic reasons and then expend a greater amount for a funeral or else suffer from the sequelae and surgery. It is beyond the advisory capacity of the attending physician, however sympathetic he may be, to correct such inconsistencies.

Medical practice pays due respect to the traditional custom of reciprocating services in local communities, but when the services of outstanding specialists are sought physicians should recognize an economic obligation.

Outside organized industries the theory

of sick insurance is sound but with a reasonable premium rate the obstacles are many and if efficient insurance companies cannot overcome these obstacles it is doubtful whether any voluntary association can succeed in which abuses and lax methods more than offset overhead expenses of the former. Certain obstacles incur considerable expense such as soliciting members, collecting premiums and keeping alive policies, defining necessary medical services, estimating degrees of disability, settling controversies, avoiding law suits, etc. Obviously families with a considerable degree of expectant morbidity would probably constitute the majority of such members and thus increase the premium rate. Economic policies like new medicinal remedies require long periods of testing before standards can be set up.

The only plan in sight at present for the average man that will insure an economic administration of an insurance fund is a "Savings Account for Sickness." Physicians, banks and newspapers should attempt to popularize this slogan. The fetish of boosting charges to magnify professional skill has passed and honest minded people are challenging medical charges as never before. Standards of fees remaining the same, discounts may be made that will afford satisfaction to the patient and in the face of such results theories to the contrary should be ignored. There was a time when a high class physician would be insulted when asked to state his charges in advance of services given but that has passed and we must be reconciled to a new order in which estimates can be given but with modifying factors. Experience has demonstrated the wisdom of an intermediary agency for the collections of accounts and in that way at times an embarrassing controversy may be avoided. Some physicians, however, have the happy faculty of a dual personality, one for professional services and another for collections.

Reduction of overhead expenses is imperative. As never before a more or less expensive equipment is necessary for efficient medical practice and this overhead should be met in a co-operative way for in the average city perhaps one-third of the laboratory and x-ray equipment would be sufficient to meet

all requirements, if put on a co-operative basis. There are sufficient needs in smaller towns to support a laboratory and x-ray equipment with a hundred per cent co-operation by local physicians. There are many younger representative physicians who are seriously handicapped from a lack of proper equipment.

Physicians generally are agreed that the present problem of securing satisfactory nursing for the average case of sickness constitutes a challenge, especially beyond the vicinity of hospitals where registered nurses cannot be secured and supported. Since the average nursing service has been estimated 75 per cent of a practical nature there is need of an intermediate grade of nurses called practical or whatnot and an opportunity is furnished for the smaller hospital to train "practical" nurses for more people.

Rome. R. M. HARBIN, M.D.

TREATMENT OF HEART DISEASE

To the Editor:

There is a doctor in south Georgia who has learned through experience how to treat heart disease. His example is so fine until I plan to tell his story to all my heart patients.

After a history, physical examination and electrocardiographic study he was told that his myocardium had been severely damaged. He replied that he realized that twelve years ago when he was forty-six and decided that his blood pressure of 260 gave a warning which must not be ignored. He said that there was nothing he had not done in the way of dissipation, over work and worry. His plan which he has followed for twelve years despite his joviality and rotundity has been not to ever over eat, work too hard, and to get sufficient rest and confine his exercise to sitting in a rocking chair in his boat and fishing while some one paddles down a creek. He says that he has schooled himself against excitement so that he never gets excited because of the size of the fish or whether he lands him or not. He tested this recently when he went to the Gulf and caught a tarpon without excitement while his friends had the "jitters".

What a lesson to pass on to our patients. We, too, may profit by his philosophy and example.

J. A. REDFEARN, M.D.

Albany, Georgia.

November 11, 1933.

The Medical Association of Georgia will hold its next annual session at Augusta, May 8-11, 1934.

FEDERAL EMERGENCY RELIEF ADMINISTRATION

Agreement for Medical Service

An agreement has been signed by the secretary-treasurer of the Medical Association of Georgia and Miss Shepperson, Georgia Emergency Relief Administrator, whereby the Federal Emergency Relief Administration will pay the members of the Medical Association of Georgia the following fees for medical service to the needy poor:

1. Office calls.....\$ 1.00
2. House calls..... 2.00
3. House calls from 6:00 p.m. to 8:00 a.m..... 3.00
4. Obstetrics, including prenatal and postnatal care..... 20.00
5. Minor surgery..... \$1.00 to \$10.00
6. Major surgery..... 50.00

The Medical Association of Georgia has appointed a committee to cooperate with the Relief Administration which will see that its "Rules and Regulations, No. 7, Federal Emergency Relief Administration," are complied with in every respect.

AMEBIC DYSENTERY AMONG CHICAGO VISITORS

Dr. Herman N. Bundesen, President of the Board of Health of Chicago, wired Dr. Allen H. Bunce, Secretary-Treasurer of the Association, on November 13th as follows:

"Reports received by us have revealed in all parts of the country an unexpected and even startling number of cases of amebic dysentery the source of which was probably traceable to a visit to Chicago. These reports were received in response to a questionnaire sent out by us to 15,000 guests registered at a single Chicago hotel from May 1st to date and they undoubtedly represent only a small fraction of the actual number of cases. We believe that amebic dysentery is a public health problem of much greater magnitude than is generally recognized by health officers and the medical profession. Our immediate concern now is in regard to those cases which remain unrecognized and thus not properly treated nor any measures instituted to protect the community as well as those cases which through wrong diagnosis are being operated upon and almost invariably are ending fatally. In view of this situation we are broadcasting Tuesday night (November 14th) at 7:30 Central Time; 7:30 Canadian Time; 8:30 Eastern Time; 7:45 Mountain Time; 8:45 Pacific Time over a national hookup of NBC., the complete story of this outbreak. We suggest that you notify the secretary of each county society in your state requesting that his membership listen in. This is most important to the medical profession."

SCIENTIFIC PROGRAM FOR 1934

The Committee on Scientific Work will arrange a program for the Augusta meeting to be held, May 8, 9, 10, 11, 1934.

We will be pleased to receive suggestions in reference to papers, and clinical cases which may be presented or reported. Any titles, papers or outlines of papers will be given careful consideration in making up the program. We think that the program should represent the cooperative effort of all members of the Medical Association of Georgia. The time limit to submit papers or titles has been limited to March 1, 1934. Anything submitted after that date will not be considered.

Respectfully,

WM. R. HOUSTON, M.D., *Chairman*

JOSEPH YAMPOLSKY, M.D.

S. T. R. REVELL, M.D.

ALLEN H. BUNCE, M.D., *Sec'y-Treas.*
Committee on Scientific Work.

RULES FOR PROGRAM

Abstract of Committee Rules

The Committee on Scientific Work proposes that the program be divided into periods, fifteen minutes to each period. A certain number of periods have been allotted to specialties. Each may have as many papers as desired during the time allotted. In general the Committee decided to have twenty-four fifteen minute periods and four five minute periods.

The chairman is to invite one guest, the President of the Association one guest, and the Calhoun Lectureship Committee one guest.

If possible all guests will speak at the same meeting on Wednesday evening and that meeting will be designated as a continuation of the scientific program.

No titles will be considered after March 1, 1934. The Committee is to meet immediately after that date. Members of the profession will be invited to send in titles by some member of the Committee. These, together with the titles received from the membership at large, will be considered at the next meeting of the Committee.

Two periods consisting of three ten-minute papers will be given over to a symposium on Medical Economics. The following is the schedule of topics.

I. General Topics—two periods.

II. Medicine—five periods.

III. Surgery—seven periods.

1. Gynecology—one period.

2. Genito-Urinary—two periods.

3. General Surgery—four periods.

IV. Pediatrics—three periods.

V. Specialties.

1. Dermatology—one period.

2. E. E. N. T.—two periods.

3. Obstetrics—one period.

VI. Cancer—one period.

VII. Fractures—one period.

VIII. Clinical Cases—four five-minute reports.

HONOR ROLL FOR 1933

1. Monroe County, Dr. G. H. Alexander. Forsyth, January 18, 1933.

2. Henry County, Dr. H. C. Ellis, McDonough, April 10, 1933.

3. Lamar County, Dr. J. M. Rogers, Barnesville, April 12, 1933.

4. Chattooga County, Dr. H. D. Brown, Summerville, April 18, 1933.

5. Campbell County, Dr. A. J. Green, Union City, May 2, 1933.

6. Franklin County, Dr. B. T. Smith, Carnesville, May 3, 1933.

7. Dougherty County, Dr. I. M. Lucas, Albany, May 12, 1933.

8. Hall County, Dr. W. R. Garner, Gainesville, June 21, 1933.

9. Hancock County, Dr. H. L. Earl, Sparta, September 30, 1933.

10. Whitfield County, Dr. H. J. Ault, Dalton, August 9, 1933.

11. Stewart-Webster Counties, Dr. J. M. Kenyon, Richland, September 30, 1933.

12. Turner County, Dr. J. H. Baxter, Ashburn, October 24, 1933.

13. Toombs County, Dr. W. W. Odom, Lyons, October 30, 1933.

14. Tattnall County, Dr. J. M. Hughes, Glennville, November 2, 1933.

NEW MEMBERS FOR 1933

Abram, Lewis, Fitzgerald

Adams, E. G., Greensboro

Adams, R. P., Winder

Andrews, Agnew, Thomasville

Austin, W. H., Griffin

Baughn, E. B., Colquitt

Baxter, J. H., Ashburn

Belcher, D. P., Pelham

Bennett, W. L., Moultrie

Bickerstaff, H. J., Columbus

Bowdoin, W. H., Statham

Bowen, J. H., Cobbtown

Bowers, W. L., Camilla

Branch, A. C., Glennville

Brice, Geo. P., Flowery Branch

Bridges, R. L. Z., Donalsonville

Burns, M. M., Pelham

Collins, J. C., Collins

Dinsmore, V. F., Tifton

Dorminy, J. N., Cordele

Doster, H. W., Rocky Ford

Ellis, W. P., Chipley

Evans, E. L., Tifton

Findley, C. W., Vidalia

Fleming, Carlton A., Tifton

Grier, R. L., Lumpkin

Griffith, E. F., Eatonton

Hall, J. M., Hazlehurst

Harbin, F. P., Lumber City

Harrell, D. B., Tifton

Harris, V. L., Pinehurst

Hendricks, W. H., Tifton
 Heyward, A. R., Warwick
 Houston, W. H., Colquitt
 Hughes, J. M., Glennville
 Hunt, J. E., Mount Vernon
 Hunter, Conway W., Atlanta
 Jackson, T. W., Manchester
 Joiner, R. M., Moultrie
 Jones, A. J., Jacksonville
 Jones, Wm. R., Columbus
 Kicklighter, R. B., Glennville
 Kitchens, O. W., Byromville
 Lane, J. E., LaGrange
 Lewis, F. L., Camilla
 Logan, J. C., Plains
 Luke, D. P., Camilla
 Lynch, C. S., Lumpkin
 Maloy, J. W., Rhine
 Martin, S. W., Hazlehurst
 McCulloh, Hugh, Jr., West Point
 McDermid, H. C., Vidalia
 McMillan, T. J., Milan
 Middleton, D. S., Rising Fawn
 Mims, S. W., Sylvania
 Morgan, D. E., LaGrange
 Ogden, I. K., Darien
 Oliver, J. M., Hazlehurst
 Parkerson, S. T., Unadilla
 Parks, F. W., Brinson
 Powell, Wm. H., Hazlehurst
 Randolph, W. T., Winder
 Rawlins, R. D., Rebecca
 Roberts, C. A., Leary
 Rountree, M. A., Reidsville
 Rushing, W. E., Millhaven
 Rutland, S. C., LaGrange
 Simpson, A. W., Washington
 Smith, E. L., Eastman
 Smith, J. R., Hahira
 Smith, S. F., Glennville
 Stapleton, C. E., Statesboro
 Story, W. L., Ashburn
 Strickland, L. V., Cobbtown
 Sutton, W. H., Midville
 Tanner, W. H., Newnan
 Taylor, J. C., LaGrange
 Walling, C. B., Collins
 Ward, J. B., Baconton
 Westbrook, R. J., Ila
 Whelchel, F. C., Alto
 Williams, C. D., Vidalia
 Wood, O. S., Washington
 Wright, J. J. C., Doerun

EIGHTH DISTRICT MEDICAL SOCIETY MEETING

Minutes

The Eighth District Medical Society met in Valdosta, Tuesday, October 10, 1933, 2:00 P.M., at the Valdes Hotel.

Meeting Called to Order—Dr. T. H. Smith, President, Valdosta.

Invocation—Rev. A. B. Lipscomb, Pastor Church of Christ, Valdosta.

Welcome Address—Dr. B. G. Owens, Valdosta.

Response—Dr. C. M. Stephens, Waycross.

Scientific Program

1. Laboratory and X-Ray Findings in Broncho-Spirochetosis, Dr. G. E. Atwood, Waycross.

a. Report of a Case, Dr. H. A. Seaman, Waycross.

b. Report of a Case, Dr. T. J. Ferrell, Waycross.

Discussion—Drs. Minchew and Atwood.

2. Vomiting in Infancy, Dr. A. M. Johnson, Valdosta.

Discussion—Dr. W. C. Boswell, Macon.

3. Some Interesting Proctologic Problems, Dr. George F. Eubanks, Atlanta.

Discussion—Drs. Tolleson, Johnson, Richardson, and Eubanks.

4. The Diagnosis and Management of Diseases of the Biliary Tract, Dr. Charles H. Richardson, President, Medical Association of Georgia, Macon. Discussion—Drs. Eubanks, McCullough, and Richardson.

5. The Management of Pelvic Inflammatory Disease. Dr. Kenneth McCullough, Waycross.

Discussion—Drs. Eubanks, Griffin, Owens, Pomeroy, Reavis, Tolleson, and McCullough.

Business Session—Election of officers—Dr. C. M. Stephens, president, Waycross; Dr. H. M. Tolleson, vice-president, Hahira; Dr. G. T. Crozier, secretary-treasurer (For three-year term), Valdosta. Douglas was selected for the next meeting place.

Dinner at the Daniel Ashley Hotel—Guests Lowndes County Medical Society—7:00 P.M.

W. F. REAVIS, M.D., *Sec'y-Treas.*

BOOKS RECEIVED

Rose and Carless' Manual of Surgery, Fourteenth Edition, revised by Cecil P. G. Wakeley, D.Sc. Lond., F.R.C.S. Eng., F.R.S. Edin., Surgeon, King's College Hospital; Lecturer in Surgery, King's College Hospital Medical School; Consulting Surgeon, Maudsley and Hammersmith Hospitals; Hunterian Professor, Royal College of Surgeons of England; member of the Court of Examiners, Royal College of Surgeons; Examiner in Surgery for the National University of Ireland, the National University of Wales, and to the University of Bristol. And John B. Hunter, M.G., Surgeon, King's College Hospital; Lecturer in Surgery, King's College Hospital Medical School; Examiner in Surgery to the University of Cambridge. American Fourteenth Edition, Edited by W. T. Coughlin, B.S., M.D., F.A.C.S., Professor in Sur-

The National Organization for Public Health Nursing is massing its efforts in every state in the union during November and December in a drive to enroll every public health nurse before January 1st as a member for 1934, and to increase its new members by ten per cent. It is expected that more than 6,000 nurses will join.

gery and Director in the Department of Surgery, St. Louis University School of Medicine; Surgeon-in-Chief, St. Mary's Group of Hospitals, St. Louis, Mo. Contains 1408 pages with an index of 60 pages. Publishers: William Wood and Company, Baltimore, Md.

The Rockefeller Foundation—Annual Report for 1932. This volume contains the following reports: Secretary, Work of the International Health Division, Work in the Medical Sciences, Work in the Natural Sciences, Work in the Social Sciences, Work in the Humanities, and Report of the Treasurer. Contains 455 pages. Publishers: The Rockefeller Foundation, 49 West 49th Street, New York, N. Y.

NEWS ITEMS

Dr. H. T. Edmondson, Moultrie, attended the annual clinical session of the American College of Surgeons held recently in Chicago.

The Whitfield County Medical Society met at the office of Dr. Frank B. Easley, Dalton, on October 10th. Dr. Robert C. Robertson, Chattanooga, Tenn., spoke on "Orthopedic Surgery."

The Barrow County Medical Society and the Lamar County Medical Society have passed resolutions similar to those of other medical societies in which they propose to protect themselves against what they term "professional deadbeats" and "luxury deadbeats."

Staff meeting of the Crawford W. Long Memorial Hospital, Atlanta, was held in the dining room of the institution on October 18th. The program consisted of a discussion of mortalities, rheumatism and arthritis. Dr. T. P. Goodwyn, Atlanta, is president; Dr. C. E. Lawrence, Atlanta, secretary.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, October 19th. Dr. L. Minor Blackford and Dr. Richard B. Wilson, gave a case report entitled "Anaphylactic Angioneurotic Edema of the Brain"; Dr. Earl Floyd and Dr. J. L. Pittman made a clinical talk on "Ketogenic Diet in the Treatment of Urinary Tract Infection; Dr. C. C. Aven read a paper entitled "Unique Thoracic Morbid States Simulating Ordinary Clinical Syndromes. Discussions were led by Dr. Jas. E. Paullin, Dr. Ben H. Clifton and Dr. Joseph C. Massee.

The monthly meeting of the staff of St. Joseph's Infirmary, Atlanta, was held on October 24th. Dinner was served in the dining room.

The staff meeting of Grady Hospital, Atlanta, was held on October 10th. Sectional meetings were held on Medicine, Surgery, Gynecology, Pediatrics.

Dr. Henry L. Levington, Savannah, was recently

elected to fellowship in the American College of Surgeons.

The Spalding County Medical Society met at the Strickland and Son Memorial Hospital, Griffin, on October 17th. Dr. E. G. Ballenger, Atlanta, read a scientific paper. The doctors of Butts, Henry, Lamar and Upson counties were invited.

The members of the Jenkins County Medical Society were entertained by Dr. Cleveland Thompson, Millen, to dinner at the Millen Hospital.

The members of the Floyd County Medical Society have organized a credit bureau. The object of the organization is for the mutual benefit and protection of its members.

Dr. Herschel A. Smith, Americus, has been elected president of the Americus Kiwanis Club.

The Georgia Medical Society met on October 24th. Dr. A. J. Waring, Savannah, submitted a report with a proposal to clear the slums in Yamacraw section. Dr. T. J. Charlton, Savannah, read a paper on Hypertension.

The Georgia Urological Association met at Hotel DeSoto, Savannah, on October 26th. Dr. S. J. Sinkoe and Dr. Major F. Fowler, Atlanta, gave a case report entitled "Sarcoma of the Left Kidney in a Girl Three Years of Age"; Dr. S. T. Brown, Dr. W. E. Upchurch and Dr. S. J. Sinkoe, Atlanta, case report, "Hemi-Nephrectomy for Pyonephrosis Involving the Left Side of a Horseshoe Kidney"; Dr. S. T. Brown, Atlanta, read a paper entitled "Nephroptosis"; Dr. Harry Y. Righton, Savannah, "Chronic Prostatitis"; Dr. Montague L. Boyd, Atlanta, "Urinary Tract Infection."

The Randolph County Medical Society met at Cuthbert on November 2nd. Dr. C. A. Neal, U. S. P. H. S., Health Officer for the Civilian Conservation Corps, was the principal speaker. Members of the society gave reports of cases and clinical talks.

Dr. Wm. E. Mitchell announces the opening of his office at 35 Fourth Street, N. E., Atlanta.

The New York Polyclinic Medical School and Hospital, New York City, sponsored special lectures at the institution on November 8th on "Observations on Infant Feeding" by Dr. Rowland G. Freeman; November 22nd, "Feeding in the First Year," Dr. Louis C. Schroeder. A lecture on December 6th, entitled "Nutrition in Infants," by Dr. Herman Schwarz.

Dr. H. L. Tippins, formerly of Savannah, announces his removal to Baxley. He has opened an office and will continue the practice of medicine at the latter location.

The Ware County Medical Society met at the Ware Hotel, Waycross, on November 1st. The members were guests of the local dental society at dinner. Dr. J. H. Lawrence, Waycross, read a paper entitled "Dental Infection and It's Relation to Systemic Disease."

The American Association for the Study of Goiter, through its Corresponding Secretary, Dr. J. R. Yung, Terre Haute, Ind., announces that the association for the fifth time, offers three hundred dollars (\$300.00) as a first award, and two honorable mentions for the best essays based upon original research work on any phase of goiter presented at the annual meeting to be held in Cleveland, Ohio, June 7, 8, 9, 1934. Competing manuscripts must be in English and submitted to Dr. J. R. Yung, 670 Cherry Street, Terre Haute, Indiana, not later than April 1, 1934. The first award of the Memphis, Tenn., 1933 meeting was given to Anne B. Heyman, A.B., M.S., University of Michigan, Ann Arbor, Mich., "The Bacteriology of Goiter and the Production of Thyroid Hyperplasia in Rabbits on a Special Diet."

The Emanuel County Medical Society met at Swainsboro on October 11th.

Dr. J. H. Butler, Augusta, has been appointed local physician for the United States government at Augusta.

Dr. H. H. McGee, Savannah, has recently been elected to fellowship in the American Roentgen Ray Society.

The portrait of Dr. Floyd Willcox McRae, Sr., deceased, formerly a well-known surgeon of Atlanta, painted by Dr. Herbert L. Treusch, Atlanta, will be exhibited in the museum at Emory University and then hung in the Academy of Medicine, owned by the Fulton County Medical Society.

The alumni of Emory University School of Medicine who attended the Richmond meeting of the Southern Medical Association assembled at dinner on Thursday, Nov. 16th. The alumni have an annual dinner each year during the annual session of the Medical Association of Georgia also while attending the meetings of the Southern Medical Association.

The staff meeting of the Crawford W. Long Memorial Hospital, Atlanta, was held on November 9th. Dr. Mark S. Dougherty and Dr. Frank K. Boland led the discussion on "High Blood Pressure—Its Treatment from both Medical and Surgical Standpoints."

Dr. J. K. Burns, Gainesville, and Dr. Shelton Sanford, Savannah, were each presented with a "Cross of Service" at the recent annual convention of the United Daughters of the Confederacy held at Gainesville. Both served in the World War.

The Clinical Society of the Piedmont Hospital, Atlanta, met in the dining room of the institution on November 13th. Dr. J. Calvin Sandison, Atlanta, read a paper entitled "Surface Repair". Other members engaged in a discussion of mortalities during the month of October. Dinner was served in the dining room.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on November 16th. Dr. Samuel Stampa made a case report entitled: "A Case of Thrombopenic Purpura Following the Administration of Arsphenamine"; Dr. C. E. Rushin, case report. "Complete Obstruction of Jejunum Caused by Gallstones"; Dr. Z. S. Cowan gave a clinical talk on "Postoperative Toxicity"; Dr. Jack C. Norris read a paper, "Pellagra—A New Theory Concerning Etiology with a New Method of Treatment". The discussions were led by Dr. Stewart R. Boberts, Dr. E. A. Bancker, Jr., and Dr. J. F. Hackney.

OBITUARY

Dr. Charles Calhoun Carson, Talbotton; Southern Medical College, Atlanta, 1911; aged 47; died at a hospital in Columbus on October 5, 1933, from injuries received in an automobile accident. He was a prominent physician and had an extensive practice in Talbot county. Dr. Carson was a member of the Masonic lodge and the Baptist church. Surviving him are his widow, three daughters, Misses Retna, Jewell and Frances Carson; two sons, Ralph and Charles Carson, all of Talbotton. Funeral services were conducted from the Talbotton Baptist church by Rev. B. E. Donnehoo. Interment was in Oak Hill cemetery.

Dr. George C. McClure, Ball Ground; member; University of Georgia Medical Department, Augusta, 1901; aged 63; died at a private hospital in Canton on October 19, 1933 from taking accidentally an overdose of medicine. He owned a large tract of farming land and was at one time a prominent practicing physician in Cherokee county. Dr. McClure was a worthy and upright citizen and took an active interest in the welfare of his community. Surviving him are his widow, three sons, George, Robert and Wilson McClure, all of Ball Ground; one daughter, Miss Mary Emma McClure, teacher of Atlanta. Funeral services were conducted from the residence. Burial was in the Ball Ground cemetery.

Dr. Edward Preval Rice, Augusta; University of Georgia Medical Department, Augusta, 1900; aged 53; died at his home of heart disease on October 18, 1933. He had practiced medicine in Augusta for more than thirty years. Dr. Rice was noted for his loyalty and devotion to his friends. He was a member of St. Patrick's Catholic church. Surviving Dr. Rice are two sisters; Mrs. Lula R. Evans, Augusta, and Mrs. J. M. Malone, Atlanta. Funeral services were conducted by Father Keenan from St. Patrick's

Catholic church. Burial was in Magnolia cemetery, Augusta.

Dr. James Pinkney Waldrep, Atlanta; University of Georgia Medical Department, Augusta, 1890; aged 67; died suddenly at his home on October 19, 1933. He was charitable and had many warm personal friends. Surviving him are his widow and three sons, J. C., W. R., and J. P. Waldrep. Interment was in Oconee cemetery, near Athens.

Dr. Charles Edward Hall, Atlanta; member; Columbia University College of Physicians and Surgeons, New York City, 1895; aged 68; died at his residence on October 22, 1933. He was born and reared at Hickory Corners, Michigan. Dr. Hall had an extensive practice. Hundreds of people were endeared to him for his many acts of charity and kindness. He took an active interest in fraternal organizations, was a member of the Shrine and past master of the Gate City Masonic lodge. Surviving Dr. Hall are his widow, two sons, Walter T., and Dr. Chas. E. Hall, Jr.; one daughter, Mrs. C. M. Lemon. Dr. C. R. Stauffer conducted the funeral services from Spring Hill Chapel. Burial was in West View cemetery, Atlanta.

Dr. Charles Edward Waits, Atlanta; member; Emory University School of Medicine, Atlanta, 1915; aged 44; died at his home, 1105 Lullwater Road, N.E., October 21, 1933. He was born and reared at Rockmart. After receiving his degree in medicine, Dr. Waits studied at Rockefeller Institute. Later he began practice in Atlanta and took special interest in the treatment of diseases of the throat. He served two years in the medical corps of the United States army in France during the World War. For a number of years Dr. Waits was president of the staffs of Emory University and Grady Hospitals and at the time of his death was on the visiting staff of Grady Hospital. Dr. Waits was believed to be one of the most competent practitioners in the southeast to treat diseases of the thyroid. He has held many important committee assignments in the Medical Association of Georgia and rendered excellent service in all his work. Dr. Waits was a member of the Committee on Scientific Work at the time of his death. He was a member of the Fulton County Medical Society, American College of Surgeons, Southeastern Surgical Congress, Southern Medical Association, American Medical Association, F. & A. M., and Shrine. Dr. Waits was loyal to every trust and held in high esteem by all his acquaintances. Surviving him are his widow and three sons, Charles, Edward and William Waits. Funeral services were conducted by Dr. Louie D. Newton from Spring Hill Chapel. Burial was in the family cemetery at Rockmart.

Dr. Sherman John Darnell, Talking Rock; Georgia College Eclectic Medicine and Surgery, Atlanta, 1893; died at his home on October 26, 1933. He was one

of the outstanding physicians of North Georgia and did a great deal of charity practice. Dr. Darnell was a member of the Talking Rock Baptist church. Surviving him are his widow, one son, Sherman John Darnell, Jr.; one daughter, Miss Stella Byrd Darnell, all of Talking Rock. Funeral services were conducted from the Talking Rock Baptist church, and burial was in the church yard.

Dr. Frank Crawford Story, Doerun; Medical Department University of Georgia, Augusta, 1926; aged 37; died at Indianapolis, Ind., October 30, 1933. He was formerly instructor in Anatomy at the Medical Department University of Georgia; Health Commissioner of Wayne County; Health Commissioner of Jenkins County; for the past three years on the staff of the Veterans Hospital at Marion, Ind. Surviving him are his widow and four children, Frank C., Jr., and Misses June, Marion, and Ann Story. Burial was in the Doerun cemetery.

AUTOMOBILE INSURANCE—PROMPT SETTLEMENT

J. W. & John L. Overstreet
Attorneys-At-Law
Sylvania, Ga.
November 2, 1933

Mr. James W. Morton, Jr.
State Farm Mutual Auto Ins. Co.,
746 Glenn St., S.W.,
Atlanta, Ga.

Dear Mr. Morton:

I have been tardy in writing you to express my thanks to you and your company for the prompt adjustment of a claim arising under a public liability insurance policy held by E. K. Overstreet, Jr., of Sylvania, Ga., issued by The State Farm Mutual Auto Insurance Co. of Bloomington, Ill. I represented W. T. Overstreet and all the claimants interested in this policy of insurance. The adjuster for your company, Mr. Love, and you as General Agent for the State of Georgia met in my office and carefully went over all the items set out in claim for damages and I am glad to say, as you were present and heard the discussion, that all my clients were entirely satisfied with the adjustment of these claims and you promptly gave us a draft for the amount agreed upon.

I desire to take this method of congratulating you and your company upon the square dealing that you are making with your policyholders and I sincerely hope that your business will continue to increase in this state until you can count your policyholders in Georgia among thousands. And you are at liberty if you see fit to publish this letter in your company paper.

Yours sincerely,
(Signed) J. W. OVERSTREET

INSURANCE CLAIM PROMPTLY PAID

The Telephone has just learned from reliable sources that the claim against the State Farm Mutual Automobile Insurance Co., through a policy held by Mr. E. K. Overstreet, Jr., arising out of the very tragic accident in which Leah Overstreet, wife of Tom Overstreet, was killed, and several others were injured, was settled satisfactorily to all concerned.

This accident within the very city limits of Sylvania makes all who drive cars conscious of tragic possibilities and shows the worth of a form of insurance that not only protects the one who pays for the policy but also furnishes a means whereby the injured may receive compensation as much as money can compensate for such injuries.

The Sylvania Telephone—Oct. 13, 1933.

NO INTEREST IN AUTOMOBILE INSURANCE

The Medical Association of Georgia and its officers are not interested in automobile insurance further than the interest manifested in all its Journal advertisers. Any reputable insurance company may take space in this Journal and will receive the same careful and courteous consideration.

AUTO HYPODERMIC SYRINGE

The Auto Hypodermic Syringe advertised in this issue of the Journal was invented by Mr. Thos. M. Quarles, a Georgian. The number 2 model is an improvement over the first. The syringe has attracted the attention of many prominent physicians, among them Dr. Geo. A. Wyeth, New York City, former president of the American College of Physicians. He states that "The syringe is not only painless but is easy for the operator." The instruments are sold by Everhart Surgical Supply Company, 493 Peachtree Street, N.E., Atlanta.

WHICH COD FISH SHOULD BE USED FOR MEDICINAL COD LIVER OIL?

"Zilva and Drummond" were the first to draw attention to the high vitamin value of oil prepared in Newfoundland, an observation that has been repeatedly confirmed."

"The figures for the estimations of vitamin A show that . . . the Norwegian oils are the lowest, followed in increasing order by the Scottish, Icelandic and Newfoundland oils."

"The vitamin D tests also reveal the relatively high value of Newfoundland oil." "The northern fish grow more slowly than those frequenting the southern shores." (e.g., Newfoundland—due probably to the warmer temperature of the Gulf Stream—from "The Relative Values of Cod Liver Oils from Various Sources," by J. C. Drummond and T. P. Hilditch.

Mead's Newfoundland Cod Liver Oil and Mead's 10 D Cod Liver Oil with Viosterol are made from Newfoundland codfish exclusively.

"J. Soc. Chem. Ind., 1923, 42, 185,205.

COCOMALT

It has been estimated that in many cities in the temperate zone, fully 90 per cent of the child population shows the effect of vitamin D deficiency in bone and tooth development.

There is no appreciable amount of vitamin D in common articles of food; but by drinking delicious chocolate flavor Cocomalt every day, a growing child is definitely safeguarded from a vitamin D deficiency.

For vitamin D is present in Cocomalt in the proportion of 30 Steenbock (300 ADMA) units per ounce—the amount used to make one drink. Mixed with milk according to directions, every cup or glass of Cocomalt a child drinks is equivalent in vitamin D content to two-thirds of a teaspoonful of good cod-liver oil.

Many physicians recommend Cocomalt routinely during pregnancy and lactation, not only because of this rich vitamin D content, but because of the extra proteins, carbohydrates and minerals (calcium and phosphorus) which Cocomalt provides.

GERBER CEREALS AND VEGETABLES

We feel that our products are gaining, constantly, in prestige, not only with consumers, but also with the medical profession. Because a food company's relations with the doctors always are an interesting subject, perhaps this story ought to include an outline of our own attitude.

In one of our booklets we say this:

"Advice on baby's diet is offered freely on every side to the point where it is confusing and conflicting.

"It is not the intention of this booklet to add to the confusion. Instead, it tells simply how Gerber's foods for baby come into being and how they are prepared—the story of progress in infant feeding.

"When you are confused about anything you do not understand, you ask somebody who knows. Why not do this in the vitally important matter of food for your baby?

"The doctor plans diets for lots of children. It is a simple, everyday matter for him. Give your baby the benefit of competent, individual, medical advice."

It happens that my people have been engaged for generations in the packing of vegetables. We have learned, we believe, how to pack them so that they will retain their vital food elements. Before we went into the packing of vegetables for babies, we did much studying. We consulted with many authorities. From many sources we drew specialized knowledge. We built a modern plant, reproducing on a large scale the cooking apparatus used in scientific laboratories, and equipped it to supply cooked and strained vegetables to meet the requirements laid down by those who know.

But we are not physicians.

Because we hoped that physicians would prescribe our products for babies, we knew that we needed the

physicians' good will and their confidence.

Our attitude has been, not that we ought to glorify the physician—because he doesn't need glorification—but rather to recognize him, publicly, as one who holds a position highly important to the health and welfare of society.

Our aim has been to impart to parents the good, sound thought that a competent physician, understanding the problems of infant-feeding, can render the parents and the children a real service.

Fallacy of "Chart" Feeding for Babies

During the last few years we have observed many instances that demonstrate the fallacy of feeding babies in accordance with published charts and formulas. The charts may be good for "averages"; but mostly they are impractical for individual cases. Hence, our emphasis upon competent, medical advice.—Gerber Products Division, Fremont Canning Company.

INFORMATION

The Journal office is glad to furnish any information which may be available. If knowledge is not at our command in the office, it will be obtained for any of our readers when possible. When we cannot supply data direct, your communication will be referred to some one most likely to supply correct and reliable information.

Portable Electrocardiograph

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THE JOURNAL OF THE MEDICAL ASSOCIATION OF GEORGIA

DEVOTED TO THE WELFARE OF THE MEDICAL PROFESSION OF GEORGIA
PUBLISHED MONTHLY under direction of the Council

Volume XXII

Atlanta, Ga., December, 1933

No. 12

BICENTENNIAL OF GEORGIA

As we are celebrating this year the 200th anniversary of the founding of our state it may be of some interest to look back into its history and see when our own organization came upon the scene.

In the old files of the Georgia Telegraph, now the Macon Telegraph, of the date of February 27, 1849, I find the following:

"At a meeting of the physicians of Macon, held on the nineteenth of February, Charles Thompson, M.D., was called to the Chair, and C. D. Quintard was appointed Secretary.

The Chairman briefly stated that the meeting had been called to make such arrangements as might be thought proper for the State Medical Convention to assemble in Macon on the twentieth of March, next.

Dr. James M. Green then offered the following:

"Resolved that we concur in the propriety and the necessity of a Convention of the Medical Practitioners of this State for the purpose of forming a State Medical Association and for other purposes beneficial to the profession," as suggested by the Medical Societies of Augusta and Savannah; and also that Macon, from its central position and readiness of access, is a very eligible place for the assemblage of the Convention.

This with the following resolutions offered by Dr. E. L. Strohecker were unanimously and cordially adopted:

"Resolved that we greet those of the faculty who assemble here, at the time designated, in a spirit of courtesy, kindly consideration, and professional fellowship, and be happy to co-operate with them in the enactment of any measures having for their object the promotion of Medical Science in Georgia.

"Resolved that a committee of three be appointed for the purpose of procuring a hall,

and making such other arrangements as they deem necessary for the accommodation of the Convention.

"Resolved: That the proceedings of this meeting be printed in the city papers, in the March number of the Southern Medical and Surgical Journal, and that editors generally throughout the state be requested to circulate intelligence of the time and place of meeting.

The Chairman then appointed the following committee on arrangements: Dr. E. L. Strohecker, James M. Green, and C. T. Quintard.

A motion was also made and seconded, that the Secretary transmit copies of the minutes of this meeting to the Medical Societies of Augusta and Savannah.

Charles Thompson, M.D., Chairman.

C. T. Quintard, M.D., Secretary.

And so on the twentieth of March, 1849, this Convention met in Macon and then and there was founded the Medical Association of Georgia

In a still earlier file of this same paper under date of May 2, 1835, I find a report of a Medical Meeting in Macon, and among those present were Drs. Cunningham of Augusta; Newton and Woodson of Houston County; Germany of Hawkinsville; Crawford and Wimberly of Twiggs County; Holt, Baber, Lamar, Ball, Franklin, McGoldrick, Jamison, Ellis, Bridgeman, and Wiley of Macon.

At this meeting the following was offered:

"Resolved that Drs. Baber, Ball, McGoldrick, and Lamar be named as a committee to call together a Convention in Macon, for the discussion of the organization of a State Association."

What came of this we do not know, as it was fourteen years later that the organization was perfected.

From this humble beginning our organi-

zation has grown steadily, keeping abreast of all medical progress, pointing the way in our state to better and happier living conditions for its citizens, and sharing with its members the fruits of scientific knowledge and throwing around them the protection of the strong arm of organized medicine.

CHAS. H. RICHARDSON, M.D.
Macon. *President, 1933-1934.*

It is especially appropriate that Georgia during this year has been celebrating its two hundredth birthday. This bicentennial celebration has caused a wide and interesting study of our state and perhaps we all know more about Georgia this year than we knew before. It is interesting indeed to study one's own state from its early settlement to the present time and note its marvelous growth and achievements. Georgia is especially fortunate in its geographical location, possessing a moderate climate, a variety of soil, and scenic beauty not excelled by any state. Its mineral and marble deposits, its diversified agriculture, and in recent years, its greatly increased industrial developments, make Georgia really merit its title, the "Empire State of the South."

While these natural resources have by no means been developed to their fullest possibilities, yet, the citizenry of our state have been alert and progressive and Georgia has pioneered in many laudable undertakings.

Georgia has the oldest State University, south of Virginia; the oldest college in the world for women; and certainly was the first state to use ether for anesthesia. A long list of facts in which our state has been a leader and developer could be given but space will not permit.

During the last few years our state has made great advances in all forms of education, and is rapidly developing a system of roads that will be a great asset to our commonwealth.

If our state is great, and we know that it is, then certainly the medical profession has played its part well in the making. No state is any greater than the health of its people, nor can any worthwhile undertaking be accomplished without a healthy cit-

izenry, hence, our past, as well as our future has been and will be vitally dependent on the accomplishments of the medical profession.

Much has been and is being done to rid the state of typhoid fever, malaria, hookworm and other preventable diseases, yet, we have plenty of work to do along this line, but we have confidence that the medical profession will be equal to the task and that Georgia will stay in the forefront.

During these periods of unrest, of uncertainty and depression, the medical profession has been affected just as vitally as any other line of activity, yet the profession has carried on its work unselfishly and without unnecessary complaint.

If there was ever a time when medical solidarity was needed it is now. We have many new problems to meet and to solve, but we have faith that they will be solved for the best interest of the public health and the profession.

No organization within the borders of our state has been more interested or more loyal to the state's upbuilding and progress than has the Medical Association of Georgia. Since its organization in 1849, its prime motive has been a healthier Georgia, and I would like to urge every physician in our state to be loyal to the Association which has been so loyal to Georgia. Every physician will get more out of his life to be an ardent supporter of medical organization.

No state has a richer history, more glorious achievements, or a brighter future than Georgia.

C. L. AYERS, M.D.
Toccoa. *President-Elect, 1933-1934.*

About twenty-five years ago (in 1909) the Medical Association of Georgia saw fit to make me (a country physician, its president; and since that time every other year, a country doctor has been thus honored. Prior to this time, very few country doctors had held this office, the position usually being given to a specialist or a city practitioner. The result was, that the organization was not rendering full service to the country doctor, nor the general public.

GENERAL
JAMES EDWARD OGLETHORPE



Founder and First Governor
of Georgia



Courtesy of Oglethorpe University



In this year of my service as president, we took as our major project the organization of all congressional districts and counties not already organized, thus adding many new members to the Medical Association of Georgia, since becoming a member of a county society automatically makes one a member of the Association. In this work we were conforming with the provisions of the American Medical Association's plan under which our state had only recently been re-organized.

During my administration, the Council decided to recommend to the Association the publication of a medical journal, instead of the yearly publication of a book of the proceedings of the Association. When we met in 1910 in annual session at Athens, while I was still president, the Association adopted this recommendation of the Council. The Journal of the Medical Association of Georgia had its birth at this meeting, and since that time it has been a regular monthly visitor to every member of the Association. It is now recognized as one of the leading state

medical journals. This publication has done much to inform us as to the progress of medical science. It has also kept us posted in regard to the things organized medicine is undertaking to accomplish.

Looking back then, it now appears, 1st, that by recognizing the general practitioner in bestowing upon him equal honors with the specialist and city doctor; 2nd, by organizing the district associations and the county societies; and 3rd, by publishing the Journal, we have created a better spirit of fellowship and understanding among medical men. As a result, we are not only getting more joy out of the practice of medicine, but we feel that the public is getting better service.

On account of our being better organized, the appropriation for the State Board of Health has been greatly increased, enabling it to do very much more public health work. The Ellis Health Law was enacted by the General Assembly, and now several counties have an active Board of Health, which includes an all-time health commissioner and

nurse. Also, our organization has secured the establishment of the State Tuberculosis Sanatorium at Alto. This institution, though it has not the capacity commensurate with our needs, is doing excellent work. Another valuable institution which we have secured through being better organized, is Gracewood Sanitarium for Mental Defectives. While the medical profession does not claim sole credit for these institutions, and their continued growth and development, we take pride in the fact that we were leaders in the work. At the same time, we are pleased to give credit to other organizations and individuals for their valuable co-operation.

In view of this progress made by organized medicine in Georgia during the past twenty-five years, we feel that we have built well upon the structure which came to us as a heritage from its founders in 1849. We also feel that we have kept pace with the wonderful progress Georgia has made in the two hundred years since the founding of the colony.

I esteem it a great honor to have been permitted to serve as a leader in an organization composed of physicians of such high character and noble purpose. Especially, do I appreciate the privilege of having been its president at a time when such far reaching and valuable constructive work was under way.

THOS. J. MCARTHUR, M.D.,
Cordele. *President, 1909-1910.*

President Franklin D. Roosevelt assisted in bringing to a climax the celebration of Georgia's 200th birthday, in Savannah, where General Oglethorpe landed two hundred years ago. Besides the President and his mother, Mrs. James Roosevelt, there were present: Governor Talmadge of Georgia, Governor Blackwood of South Carolina; United States Senators George and Russell; General Sumner, and many other dignitaries.

The setting for the visit of the President was ideal. It was one of those alluring November days in south Georgia which greeted the President on his visit to the historic city of Savannah. No city anywhere, regardless

of size or situation, could have out-done the "Mother City of Georgia" in greeting the most famous of Americans, if not indeed, the world's leading citizen. That he was pleased at the reception that was accorded him, is shown in the three words with which he is credited with having described it,—*"It was wonderful!"*

The history of the medical profession in Savannah and Georgia, as revealed in the annals of the Georgia Medical Society, the Medical Association of Georgia, and the American Medical Association, begins with the arrival of the first colonists in Georgia, two hundred years ago. The Georgia Medical Society is the oldest medical society in the state of Georgia, and the second oldest in the United States. It was incorporated December, 1804. There were eighteen members, physicians of distinction, culture and education. Some of them had fought in the Revolutionary War. One of the members, Dr. George Noble Jones, helped to frame Georgia's Constitution in 1798. Another of its members, Dr. Richard D. Arnold, was one of the pioneer leaders of the public health movement in America, and was Vice-President of the National Sanitary Convention. Dr. Arnold also took an active part in organizing the Medical Association of Georgia in 1849, and was chairman of the committee which wrote the Constitution,—and was the Association's President in 1851. He was also one of the founders of the American Medical Association, and was its first Corresponding Secretary. Later, when serving as one of its Vice-Presidents, Dr. Arnold was one of the committeemen who framed the Code of Ethics of the American Medical Association.

There were many outstanding men in the early history of the Georgia Medical Society, namely,—Dr. Noble Wimberly Jones, Dr. William Richard Waring, Dr. John Le Conte, Dr. R. J. Nunn, Dr. Thomas J. Charlton, Dr. Raymond Harris, and others. The Medical Association of Georgia has grown and progressed in every way during its history, but in my opinion, at the present time, one of its greatest, yes, probably *its best asset, is—"The Woman's Auxiliary*

(organized in 1925) to the Medical Association of Georgia."

RALSTON LATTIMORE, M.D.

Savannah.

President, 1912-1913.

Since the creation of the world God has "Moved in a mysterious way His wonders to perform." These have found being both rapidly and slowly, evidently as the Great Creator would have and provide.

When He would have America made known to the human race, he found a Columbus to span the ocean and reveal what lay "on the other side." Naturally then began the rapid development of the wonderful "New World."

This new country was soon made the refuge of many inhabitants of the Old World, who sought greater freedom for development of their innate abilities, as well as escape from the more tyrannical governments beyond the sea, and, too, where they might serve God as their consciences' directed.

As thousands of years rolled by, there came to be a situation in England which led to varied punishments of insolvent debtors. Finally there appeared on the scene a "man with a heart"—beyond question another wonderful act of Providence, thus furnishing the great Oglethorpe, who was to become a Moses for the American. He led many of the down-trodden of the Old World to a haven in the New World, where they could not only serve God as dictated by their consciences, but where they might have a part in building a humane government to which, and into which, all the suffering ones of the hereditary monarchies of the countries beyond the seas might come and form a part.

James Oglethorpe possessed not only great intelligence and a godly sense of humanity, but the necessary ability to lead mankind in the formation of a new and humane government in the New World to which he determined to migrate. Imbued with such thoughts and inclinations he gathered about him a lot of insolvent debtors and oppressed European Protestants, set sail, and obtained a charter for a tract of land between the Altamaha and Savannah rivers, which he had named in honor of King George the Second,

Georgia. He founded early in 1733 what has since been known as Savannah, a city of 90,000 population. Oglethorpe being possessed of military ability, overcame, as time passed, the surrounding Spaniards as well as Indians, finally laying the foundation of what has come to be known as the "Empire State of the South", inhabited by a great people, possessed of great wealth, and a marvelous progressive nature. As a finale to these thoughts permit me to refer to just a few advances made in medicine which without the work of the great founder of the state, might not have until this day had being. There are many things which I will not be able to name, both in medicine and surgery, but at the moment there occurs to me the names of Crawford W. Long, the discoverer of ether anesthesia; Robert Battey with an oophorectomy operation; and Dr. Dugas with an easy method for determining the dislocation of the shoulder joint. The value of what just three Georgia doctors have done for humanity is inestimable. From Savannah has spread our great state. From this city the first steamship crossed the Atlantic ocean and to it belongs much credit for the development of the south. Savannah is destined to become widely advertised by the manufacture of paper from our southern pines due to a great chemist, Dr. Herty.

These and thousands of other great things can be said of the wonderful achievements at this period of Georgia's history.

J. G. DEAN, M.D.

Dawson.

President, 1916-1917.

The commemoration of the bicentennial of Georgia is uppermost in the minds of Georgians this year. Now we are reviewing the history and why James Edward Oglethorpe settled a colony on a bluff eighteen miles from the sea after making friends with an Indian chief through an Indian woman who could speak English.

The colonists gave thanks to God and built a thriving colony and named it Savannah, after the river on which it was situated. From this we have the beginning of the settlement of Georgia. About this time Germany banished some forty thousand from

their homes on account of difference of religious belief. A number of these settled in Georgia, twenty-five miles from the ocean and called the place Ebenezer, now in Effingham County, where they could worship God according to their own dictates and conscience.

The incident of Oglethorpe bringing poor people to liberty and to work, and the Germans coming to worship God according to their own dictates reminds us that history is repeating what was enacted two hundred years ago. The poor have been given labor and homes in our own Georgia. Our nation has declared religious freedom, even when recognizing Russia in diplomatic circles, while the Germans have banished some of their population on account of religious beliefs.

So in commemoration of this bicentennial we are thankful for a land of liberty, brotherhood and freedom of religious beliefs.

Referring to health in the beginning of the settlement of the colonies, Waller penned the following verse,

"So sweet the air, so moderate the clime,
None sickly lies, or dies before his time,
He ever sure, has kept this spot of earth uncurs'd
To show how all things were created first,"

We have little history that there were any medical advisers with the colonists. The earliest record we have of any medical society in Georgia having been formed was the Georgia Medical Society of Savannah in 1804. This society has functioned continually and is a thriving society today, being a unit of the Medical Association of Georgia. The record shows that (beginning in 1808) the physicians of this society had struggles for several years combating yellow fever.

Crawford W. Long was reported as having submitted his first report of the use of ether to the Georgia State Medical Society in 1842.

The transactions of the Medical Association of Georgia of 1899, which was held in Macon, Georgia, gives an account of the semi-centennial celebration of the organization of the Medical Association of Georgia; Dr. Howard J. Williams of Macon, was president of the Association that year and had this to say in introducing Hon.

Emery Speer, who was to make the welcoming address to the Association, "Just three stones' throw from the present meeting place between seventy-five and eighty physicians had gathered in Macon to organize this Association fifty years ago. They had come from all parts of the state by slow and tedious methods of travel in vogue then."

On page 55 of the transactions of 1899 is a list of the original organizers of our Association, being seventy-six in number and from 31 counties. Four of them were from Fulton County, seven from Monroe County, and fourteen from Bibb County. We contrast this today with Fulton County with more than four hundred members. Bibb county with most a hundred and Monroe with only five but 100 per cent membership.

Dr. Louis D. Ford of Augusta, Georgia, was the first president of the organization. Dr. R. D. Arnold, Savannah, Georgia, was vice-president. James M. Green of Macon, was the first secretary and later a vice-president.

Seven delegates to the American Medical Association were named at this meeting. At one meeting later over forty delegates were named. At present we are fortunate enough to be allowed three delegates to this organization. The difference in these appointments is governed by the more perfected organization allowing each state association, one delegate for each five hundred members.

At the meeting of 1899 there were several of the original organizers of the Association present. The President, Dr. Howard J. Williams, read a lengthy historical poem to the surviving members of the first meeting of the Medical Association of Georgia, which was published in the transactions that year.

May we hope that when we celebrate our centennial meeting in 1949 that we may have a good attendance of the members who attended the 1899 semi-centennial meeting.

The Association published its transactions each year in book form and had papers read from different congressional districts.

At the annual meeting of the Association in 1905 in the ball room of the Kimball House, Atlanta, Georgia, the Association was

reorganized under a plan that had been offered by the American Medical Association and had been considered at each annual meeting beginning with the meeting in Savannah in 1902, continued at the Columbus meeting in 1903, and discussed freely in an open meeting in Macon, Georgia, in 1904, and finally passed after heated arguments in Atlanta in 1905. Every physician in the nation is familiar with the present plan of organization.

Since that time our Association has grown to be one of the outstanding Associations in the United States. Following the reorganization, we began the publication of a medical journal that has become one of the most recognized journals of our nation.

We have in addition to a regular secretary-treasurer, a full time business manager, who attends to the business of the Association.

At the meeting of the Association in 1916 we adopted the Medical Defense feature of the Association, appointed a committee to be known as the Committee on Medical Defense of the Medical Association of Georgia. This committee will defend any member of the Association, who is in good standing, against any malpractice suit to the court of last resort. This committee has employed the same attorneys for a number of years, paying them an annual retainer fee. These attorneys feel that they are a part of our Association. The committee knows that they are a most important part of the Association. They have defended more than three million dollars of malpractice suits against our members and have never lost a suit. This statement verifies their necessity as a part of our Association. This feature of our Association is worth many times the price of our dues to every member.

Members of the Association should familiarize themselves with the method of seeking protection. So often members go to unnecessary expense when a suit is filed against them. To simplify this procedure, should any member have a suit filed against him, do not employ any attorney but consult, or notify, Dr. A. H. Bunce, Secretary-Treasurer of our Association.

The Association, by committees, keeps in touch with every phase of organized medicine. One of the most important committees which we have is the Committee on Public Policy and Legislation; they have rendered valuable service. Their most recent outstanding achievement is the obtaining of a place on our statute books, through enactment of our last legislative bodies, a law re-establishing our State Board of Health, with the provision that the members of this Board be nominated by official bodies of the Medical, Dental, and Pharmaceutical Associations of the state.

The progress and accomplishments of our Association as it has grown from its organization by seventy-six members in 1849 to the present time could be elaborated on by pages and pages of written matter which is most unnecessary to say to those members who will read this article or any part of our Journal. For this reason there is no need to elaborate further on the features, benefits, or progress of our Association, but make a request of those members who read this article, to rededicate their efforts to the up-building and perfecting of our Association. One of the best ways to do this is to create an interest in county and district societies. See that your county has as near 100 per cent membership of eligible physicians as possible to have. At times like these some physicians are inclined to feel they are not able to pay their dues, but no other benefits are as great to them as our societies and associations, provided they make use of their advantages.

Let those of us who are members do our fellow practitioner who is not a member the favor to explain the many advantages to him and try to make as many counties as possible 100 per cent membership by the time we have our annual meeting in Augusta in 1934.

At this writing it is the date for our "National Thanksgiving." May each physician in Georgia do as James Edward Oglethorpe and his colonists did when they arrived at Yamacraw Bluff,—give thanks to God.

Our profession in Georgia should be especially thankful for the progress we have

made since the founding of Georgia, having given to the nation some of the greatest achievements in medicine and surgery, for which medical history has given us due credit.

J. O. ELROD, M.D.

Forsyth.

President, 1924-1925.

deplorable times have failed to impair. This is encouraging, and should give us renewed hope and spirit to mend our own fortunes and the state of those around us.

FRANK K. BOLAND, M.D.

Atlanta.

President, 1925-1926.

As Georgia's bicentennial year draws to a close it is gratifying to note some improvement in economic conditions in our state and nation. Following the usual postwar period of prosperity, for the past five years we have suffered the most depressing times since the days of the civil war. These years, however, have been nothing to compare with the hard times in the south which succeeded the war. We recovered fully from that tragic era of the carpet-baggers, and so shall we recover fully from the evil days of the present.

The depression is not over, however, and until everything again becomes normal, the medical profession seems to be charged with two duties. The first of these is to keep up our own courage, and the second is to lend every possible aid toward keeping up the courage of the balance of the population. In such times, various forms of psychoses, or whatever the affliction is, become one of the commonest maladies with which every doctor comes in contact, be he physician or surgeon. If the psychosis is not the primary trouble, in many cases it plays a conspicuous role and may be the principal element that delays the patient's recovery. So that, no matter what the patient's pathological lesion may be, often we cannot cure him unless we are successful in cheering him and in convincing him that all his fears amount to little, although his condition may be nothing like as bad as our own. This then becomes an important issue to us, as true followers of Hippocrates, to forget our own troubles and help the other fellow out of his.

In 1934 the Medical Association of Georgia celebrates the eighty-fifth year of its organization, a venerable and respectable age in this new country. During this period the career of the Association has been forward and upward, a course which even these

Georgia's two hundredth anniversary stimulates in us, especially in those who are Georgians "to the manor born," a desire to delve into the past, present and future of our great state with its glorious history and traditions. We can boast with the twelve other original colonies that we have figured conspicuously in obtaining our national independence from mother England and in a later struggle, we of the south, gave our all for principles that were right. Emerging from these four years of civil strife, impoverished but undaunted, we have kept step with other progressive states to the present era, interrupted fifteen years ago for a comparatively short period in which we presented a united front with the balance of the nation in effectively putting down German tyranny which threatened our national existence. To have had part in all these struggles is a heritage we are proud of, for they were just causes and were defended gallantly.

In keeping with our progress industrially and as one of the great agricultural states, the medical profession has probably excelled all other callings and has kept pace with the procession toward a greater and greater Georgia. We can not think of Georgia as a progressive state without bringing to mind our heroes among medical men. Among these, the name of Crawford Williamson Long stands out as the greatest benefactor to mankind the world has ever known. It was none other than he who, unselfishly, first gave to the world the means for the obliteration of pain incident to surgical operations, which has made possible the progress surgery has made. I could mention many, many men of medicine, Georgians, who have illumined the pages of medical history, but space forbids; suffice it to say, that the doctors of Georgia have done their full share in advancing the cause they espouse, and we confidently look forward to men who will

accomplish still greater things as we approach perfection in the healing art.

"It's great to be a Georgian."

C. K. SHARP, M.D.

Arlington.

President, 1928-1929.

The Third District Medical Association brings congratulations to all Georgians on the celebration of the two hundredth anniversary of their state, greetings and best wishes for the Christmas season and the New Year.

J. C. PATTERSON, M.D.

Cuthbert.

Councilor, Third District.

1. When a rabid dog bites you, you are given Pasteur treatment—you live.

2. When you stick a nail, a splinter, a thorn in your foot, you are given an immunizing dose of antitetanic serum—you live.

3. When you receive compound, comminuted fractures, you are given perfringens antitoxin—you live.

4. When your air passages are clogged with diphtheritic membranes, you are given diphtheria antitoxin—you live.

5. When smallpox epidemics rage you are vaccinated against it—you live.

6. When typhoid fever claims its own by families, you are immunized by vaccination—you live.

7. When malaria prevails, you destroy the breeding places of Anopheles mosquitoes, and take antimalarial treatment—you live.

8. When yellow fever or plague is mentioned you think not of America, but regions without the bounds of modern medicine and sanitation.

Two hundred years ago rabies, tetanus, gas gangrene, diphtheria, smallpox, typhoid fever, malaria, yellow fever, and plague were synonyms of death.

Today, through the advancement of medical science, some of these diseases have been almost driven off the face of the earth, and to occupy only a minor place in the catalog others have been so completely prevented, as to occupy only a minor place in the catalog of diseases, or have been so attenuated as to be easily amenable to treatment.

Surgery has made even greater strides! With induced sleep, we submit our bodies to the surgeons with a full faith that we will awake to health and life.

The medical profession has advanced with the age and some Georgia physicians have carved names for themselves that will not fade with time.

W. A. SELMAN, M.D.

Atlanta.

Councilor, Fifth District.

The Colony of Georgia was founded by a comparatively small group of English immigrants in 1733, beginning at a point in the southeastern part of what is now the state of Georgia. Steady progress has been made in the development of the wonderful resources of this state, as has been so vividly demonstrated by the bicentennial celebrations in different parts of the commonwealth. However, a study of the exhibits on display at the various celebrations in honor of Georgia's two hundredth birthday will clearly demonstrate that much greater progress has been made during the past half century than had been attained the entire one hundred and fifty years prior to that time. In the matter of agriculture and industrial activities it is highly probable that no state in the union is making greater strides at this time than Georgia.

The healing art was carried on in a very crude manner during the early days after the settlement of Georgia. However, organized medicine did not begin in this state until 1849 when the Medical Association of Georgia was organized by a few medical men who had the vision in those pioneer days to believe that progress would best follow organized effort. Medicine made comparatively few strides during the first century after the founding of Georgia. Those days of bad roads, saddle bags, few dependable drugs, no knowledge of antiseptics or anesthetics followed the first two or three decades after the organization of our state Association. During the last half century greater progress has been made in curative and preventive medicine than perhaps all time prior to that. This is especially true of preventive medicine,

which has almost doubled the expectancy of human life in the last third of a century.

May I extend congratulations and New Year's greetings to every medical man or woman in Georgia who has had a part directly or indirectly in the great progress in the science of medicine in our state.

M. M. MCCORD, M.D.

Rome.

Councilor, Seventh District.

Settled two hundred years ago to act as a barrier between the hostile Spaniards and Indians to the south and west, and the Carolinas to the north, and for the purpose of providing a place of refuge where certain people of England might retrieve themselves from the effects of oppression and misfortune, Georgia, as a colony, came into existence at the site now occupied by the city of Savannah.

It is not necessary here to undertake a detailed account of the activities of General Oglethorpe and his followers after their arrival on these shores. History records, in ample fashion, the immense difficulties encountered by them, and the trials and hardships endured in their struggles for existence. Finally reaching a favorable site far up the Savannah river, Fort Augusta was established. From this point, this courageous group gradually extended its activities westward. Commenting on this internal migration, President Roosevelt remarked, in a recent address in Savannah, that "It was the spirit of moving forward that led to the exploration of the great domain of Piedmont and mountains that drove the westward border of the colony to the very banks of the Mississippi itself."

Blessed with almost unequaled natural advantages and resources, Georgia has elevated itself to great importance in the affairs of agriculture, mining and manufacturing. Moreover, thousands of visitors are yearly attracted who spend large sums in quest of health and in the pursuit of recreation.

Inseparable with and contributing magnificently to Georgia's material advancement must be mentioned the Medical Association of Georgia. Having its inception eighty-four years ago, it has progressed from a small

beginning to its present strength of more than seventeen hundred members. With reference to the origin of the Association, Dr. De-Saussure Ford, of Augusta, in his presidential address, delivered in Savannah in 1875, stated the following:

"In 1849, in response to a call emanating from the Medical College of Georgia, at Augusta, the representative medical intelligentsia of the state met in Savannah to organize the Medical Association of Georgia, and there it was born. Eighty men, the best in the state, answered the call, and Dr. Louis D. Ford, of Augusta, was elected its first president."

Always retaining as its ideals the finest traditions of the profession the sole aim of the Medical Association of Georgia has been one of devotion to the best interests of its members—and through them—to mankind.

The Medical Association of Georgia is exceedingly happy to take its part in the commemoration of the two hundredth anniversary of the founding of Georgia.

S. J. LEWIS, M.D.

Augusta.

Councilor, Tenth District.

The commemoration of the Bicentennial of Georgia has been expressed so fittingly and appropriately by the many agencies and organizations of the state and by individuals in song, story and pageant, that little of originality and interest remains to be recorded. However, since the beginning of many groups of historical and humanitarian interest have been recounted in the early stages of the state's development it may not be amiss to recall briefly the founding and progress of the Medical Association of Georgia.

This Association was formed and organized at a call meeting in Macon in the year 1849, it was done with the sanction of the Georgia Medical Society of Savannah and Macon. Its component parts were practically the same as today and to its everlasting glory it carried on during the War between the States and the dark period of reconstruction, coming through both a much stronger and better organization.

To name the illustrious men who have

been members of the Association is not permissible due to lack of space, but to omit Crawford W. Long, who made the greatest contribution to medicine in its entire history would be unthinkable. Then, too, we have such men as Eve, Fort, McRae, Westmoreland, Nicholson, Beatty and numerous others who left us a heritage of which we all should be proud. With this issue coming on just after having celebrated Thanksgiving and the trying times of the depression, can we look back on the years of work well done? Perhaps we have more than our share of humor and proportion, as our President said in his speech at Savannah, but a perusal of the report of the bureau of vital statistics will make us more thoughtful, especially when one woman in every eight on reaching 35 develops cancer, so says Dr. P. Brook Bland of Philadelphia. Dr. Roy W. Scott of Cleveland says: "Hardening of the arteries is the biggest unsolved problem in medicine today." Let us hope there is among us a Crawford W. Long who will solve these two very perplexing and fatal diseases.

J. COX WALL, M.D.

Councilor, Old Twelfth District.

Eastman. *Vice-Councilor, Third District.*

AMEBIC DYSENTERY

To the Editor:

So that you may be informed as to the present status of the amebiasis situation as it confronts us here in Chicago, I am giving you the following figures for your information:

To date there have been reported 419 cases, involving 138 cities, with a total of 26 deaths. Apparently these cases originated in Chicago. We have also discovered 384 carriers.

May I also list chronologically for you, the various steps in relation to this outbreak and its control:

For some years, approximately two cases of amebic dysentery have been reported each month to the Board of Health. On August 15, a report of two cases in hospitals in Chicago came to our attention, and investigation revealed that both patients had eaten at one hotel in this city. An immediate examination was made of all food handlers in this hostelry. These examinations, completed by September 1, indicated sixteen persons with active diarrhea whose stools contained *Endameba histolytica*, and eleven carriers of the organism.

Since available statistics indicate that approximately 5 to 10 per cent of the entire population are infested,

this observation did not seem to be reason for serious concern. This was particularly the case since an outbreak in another Chicago hotel in 1927 had apparently been fully controlled by the establishment of certain stringent sanitary precautions. These same precautions that controlled the 1927 outbreak, were established in the hotel concerned in the present outbreak and are still in force. In the meantime, the situation was continuously studied.

As further clinical cases were not reported from either the hotel concerned or the city at large, it did not seem necessary at that time to make general announcement. Nevertheless a preliminary report was read before the American Public Health Association meeting in Indianapolis on October 9 and released to the press which, unfortunately, did not apparently consider the item of enough significance to give it widespread circulation.

The incubation period of amebic dysentery may be as long as 94 days. Therefore, about the middle of October, reports began to come in, indicating the presence of some cases outside Chicago among persons who had stopped at the hotel concerned during the previous four months. Steps were taken immediately to re-examine every food handler as well as the non-food handlers. Moreover, questionnaires were sent to all persons who had registered at the hotel during June, July and August. As these questionnaires were returned, the Board of Health of the City of Chicago used the long distance telephone and telegrams to appraise both physicians and patients of the necessity for a study of every case of diarrhea for possible amebiasis.

By November 5, although only one-fifth of the questionnaires had been returned, enough well authenticated data were at hand to justify us in beginning to assemble them for publication. Full reports were made and published in *The Journal of the American Medical Association*, the information being released simultaneously to newspapers and news periodicals on November 14.

From the first day that we were notified of the existence of a case of amebic dysentery, and every day thereafter, as soon as a case was reported to us, we immediately notified the State Director of Health at Springfield, Ill., and he in turn made a report of those cases to the United States Public Health Service by telegraph each Monday. After thoroughly investigating the situation here in Chicago, Dr. Roscoe R. Spencer, of the United States Public Health Service, issued the following statement:

"Everything humanly possible has been done to control the outbreak. There is certainly no need for any general alarm. Dr. Bundesen and the Board of Health are to be congratulated on the promptness, aggressiveness and thoroughness with which the situation has been handled."

HERMAN N. BUNDESEN, *President*
Chicago Board of Health.

Dec. 2, 1933., Chicago, Ill.

THE JOURNAL

OF THE
MEDICAL ASSOCIATION OF GEORGIA
Devoted to Welfare of Medical Association of Georgia

139 Forrest Avenue, N.E., Atlanta, Ga.

DECEMBER, 1933

THE SEASON'S GREETINGS

A Merry Christmas and a Happy and Prosperous New Year is our prayer for all members of the Medical Association of Georgia and their families.

GEORGIA'S FIGHT FOR CANCER CONTROL

The study of neoplastic diseases in Georgia has steadily progressed since the creation of the Cancer Commission in the spring of 1918. At that time one scarcely ever saw an early cancer. Today the condition has changed so that many people are consulting their doctor for early cancer or pre-cancer.

The fight against tuberculosis had been in progress for a decade or more and the death rate from it had begun to fall when the Cancer Commission was organized. The slogan "What education has done for tuberculosis, it can do for cancer" soon became popular. The conditions, however, are too dissimilar to get rapid results.

Cancer is a unique disease. Its ravages cannot be controlled or prevented by the measures that control and prevent contagious or epidemic diseases. Its control is a personal matter and must depend on the individual and the co-operation between him and his doctor. We know that the majority of cancers occur within certain age limits. We know that certain organs in men and women are more likely to be affected than are others. Therefore, we know the age periods in which to expect them to be attacked. It only remains for a co-operative interest to be developed between the laity and the profession in order to see a great reduction in the morbidity and mortality from cancer.

We have taught that early cancer is curable, and we still believe it. We have seen cancers in various organs and structures of the body remain well for many years after treatment. We have tried to follow the lead of Dr.

James Ewing and impress on all with whom we have come in contact the fact that cancer is not one disease, but a group of many lesions allied to each other in that they are composed of cells which have reverted to a primitive type and have lost their relation to the law of nature. It is, therefore, most likely that we will never see a sure cure for cancer. A remedy that destroys one type will often stimulate another.

During the life of the Cancer Commission much has been learned about cancer. Radium and x-ray as therapeutic measures have been popularized. By an examination of the cells composing a cancer it is now possible to tell with reasonable accuracy the method to use in treatment and the results which will be obtained.

We believe that many lives can be saved by early diagnosis and the proper care of pre-cancer lesions—lesions that experience has taught us will eventually become malignant. Cancer never occurs in a healthy structure. The educational propaganda conducted by the Cancer Commission has borne fruit and will continue to do so.

Georgia doctors are well prepared to care for all forms of cancer. Well-equipped individual groups and hospitals are located in every part of the state, so that it is unnecessary for patients to leave their friends and doctors whom they know to seek treatment from doctors in some distant city.

Periodic health examinations will reveal many hidden conditions that can be mitigated or cured. Cancer is one of them. We strongly advise every doctor in Georgia to urge his clientele to have a careful physical examination once a year. Just the type of examination required by our best life insurance companies. If any suspicious lesion is discovered, further investigation can be made.

During the next year a one-page signed article written by some member of the Cancer Commission will appear in the Journal each month. We hope that these articles will be read and filed by the members of the Medical Association of Georgia.

J. L. CAMPBELL, M.D.

Chairman, Cancer Commission.

FEDERAL EMERGENCY RELIEF
ADMINISTRATION, GEORGIA
RELIEF COMMISSION

Fee Schedule for Medical Service

Plan of cooperation between the Georgia Relief Commission, representing the Federal Emergency Relief Administration, and the Medical Association of Georgia, representing the medical profession of Georgia.

The Medical Association of Georgia agrees to furnish adequate medical service to those on the relief rolls upon written request from the local administrators of the relief funds at the following schedule of fees:

1. Office calls.....\$ 1.00
2. House calls..... 2.00
3. House calls from 6:00 p.m. to
8:00 a.m..... 3.00
4. Obstetrics, including prenatal and
postnatal care..... 20.00
5. Minor surgery.....\$1.00 to \$10.00
6. Major surgery..... 50.00

The Medical Association of Georgia has appointed a committee to cooperate with the Relief Administration which will see to it that "Rules and Regulations, No. 7, Federal Emergency Relief Administration," are complied with in every respect.

This 2nd day of November, 1933.

Signed,

GAY B. SHEPPERSON,

Ga. Emergency Relief Administrator.

ALLEN H. BUNCE, M.D., *Sec'y-Treas.*

Medical Association of Georgia.

GEORGIA RELIEF COMMISSION
STATE CAPITOL
Atlanta, Ga.

G. R. C. Bulletin No. VIII, November, 1933
RULES AND REGULATIONS GOVERNING
MEDICAL CARE

The following Rules and Regulations governing Medical Care provided in the home to recipients of unemployment relief should be carefully read. Please note that you are not permitted to make changes or exceptions.

If for any reason the regulations set forth

do not meet the conditions in your county, you should immediately communicate with Miss Gay B. Shepperson, State Emergency Relief Administrator, Georgia Relief Commission, setting forth the conditions and stating what other plan will meet your need. Under no condition are you to put any other plan into operation before authorization has been received from the Georgia Relief Commission. The following excerpts from the rules and regulations are of primary importance in setting up the service:

"The policy adopted shall be to augment and render more adequate facilities already existing in the community for the provision of medical care by the medical, nursing, and dental professions to indigent persons. It shall imply continuance in the use of hospitals, clinics, and medical, dental, and nursing services already established in the community and paid for, in whole or in part, from local and/or state funds in accordance with local statutes or charter provisions. Federal Emergency Relief Funds shall not be used in lieu of local and/or state funds to pay for these established services.

The phrase "in the homes" shall be interpreted to include office service for ambulatory patients, with the understanding that such office service shall not supplant the services of clinics already provided in the community." (See p. 3, F. E. R. A. No. 7).

II. The Georgia Relief Commission and the Medical Association of Georgia have agreed on a scale of fees upon which the Medical Association of Georgia agrees to furnish adequate medical service to those on relief rolls upon written request from the County Relief Administrator.

This schedule follows:

1. Office calls.....\$ 1.00
2. House calls..... 2.00
3. House calls from 6:00 P.M. to 8:00 A.M. 3.00
4. Obstetrics, including prenatal and postnatal
care..... 20.00
5. Minor surgery.....\$1.00 to 10.00
6. Major surgery..... 50.00

The method of payment of the physicians and form of report as covered in pp (h), p. 5 of F.E.R.A. No. 7.

III. No calls paid for which do not originate in the County Relief Administrator's office. (See p. 3, pp. (a) F.E.R.A. No. 7, as follows:

(a) Written Order.—All authorization for medical, nursing, and dental care shall be issued in writing by the local relief officer, on the regular relief order blank, prior to giving such care; except that telephone

authorization shall immediately be followed by such a written order. Authorization for medicine and medical supplies shall also be issued in writing and, in general, such authorizations shall not be issued except upon written request of the physician authorized to attend the person for whose use they are desired.

IV. Frequency and amount of service to individual or family are covered in excerpts, p. 3, pp. (b) (c) (d), as follows:

(b) *Acute Illness.*—Authorization for medical care for acute illness shall be limited to a definite period and a maximum expenditure or number of visits (i.e., not more than 2 weeks or 10 visits), according to the standard agreement made between relief officials and physicians. Medical care in excess of this period shall not be authorized until after a reinvestigation of the case in the home by the local emergency relief administration.

(c) *Chronic Illness.*—Medical care for prolonged illnesses, such as chronic asthma, chronic heart disease, chronic rheumatism, diabetes, etc., shall be authorized on an individual basis, and, in general, visits shall be limited to frequency (i. e., not more than 1 visit per week for a period not exceeding 2 or 3 months) by agreement. If necessary, more frequent visits, by the physician or nurse, for an acute attack occurring in the course of a chronic illness, may be authorized. Care for chronic illness authorized under this section shall supplement and not supersede community services, such as visiting nursing service or institutional care.

(d) *Obstetrical Care.*—Authorization for obstetrical service in the home shall include an agreed minimum number of prenatal visits (where possible), delivery in the home, and necessary postnatal care. Due caution shall be exercised that this authorization for delivery in the home does not involve undue risk to the patient for whom hospital care may be imperative. The physician authorized to attend the confinement in the home shall be responsible for certifying to the local relief administration that, in his professional judgment, delivery in the home will be safe.

V. You should read very carefully the F.E.R.A. Bulletin No. 7 and G.R.C. Bulletin on Nursing Care, which supplement the information in this bulletin.

VI. *Steps to be taken to establish service.*

(a) You should request your County Medical Society, County Dental Association, County Nurses Association and County Pharmaceutical Association, each, to appoint a representative to serve on a Committee to advise you in your plans. If there exists a County or City Board of Health, or if there is a County Health Officer or County Nurse, they should be asked to serve on this Committee.

(b) Each member should be requested to read carefully F.E.R.A. Bulletin No. 7 and to discuss with you the best plan for calling the physician and coordinating the nursing service.

(c) The following plan is suggested as being the most effective way of distributing the service:

1. Only those calls originating in the C. R. A. office will be paid for; if the patient calls the physician direct, the C. R. A. is not responsible for payment for the visit.

2. The patient should be requested to name the physician they prefer; attention is called to pp. (a), p. 2, F.E.R.A. No. 7.

3. In cases where there is no preference expressed and where the patient lives in the city, the Doctors' Exchange, if it exists, or, if in the county, some other central plan agreed upon by the doctors, should be asked to assign a physician.

4. When this procedure is followed, the Exchange should report back immediately that the call has been placed, and the name, address and 'phone number of the doctor accepting it. This doctor should immediately call the County Relief Administrator and get all information about the case and as soon as he has visited, should make a report back as to findings and necessity for further service, also stating whether prescriptions, nursing service, special diet or supplies are needed. Attention is directed to pp. (i) p. 5, F.E.R.A. No. 7, Governing Medical Supplies.

SCIENTIFIC EXHIBIT—A. M. A.

Application blanks are now available for space in the Scientific Exhibit at the Cleveland Session of the American Medical Association, June 11 to 15, 1934. The Committee on Scientific Exhibits requires that all applicants fill out the regular application form and requests that this be done as early as convenient. The final date for filing applications is February 26, 1934. Any persons desiring application blanks should address a request to the Director, Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

WOMAN'S AUXILIARY OFFICERS

President—Mrs. J. Bonar White, Atlanta.
 President-Elect—Mrs. J. E. Penland, Waycross.
 First Vice-President—Mrs. J. J. Pilcher, Wrens.
 Second Vice-President—Mrs. R. C. Pendergrass, Americus.
 Third Vice-President—Mrs. G. Hugo Johnson, Savannah.

Recording Secretary—Mrs. Warren A. Coleman, Eastman.
 Corresponding Secretary—Mrs. E. A. Allen, Atlanta.
 Treasurer—Mrs. Chas. Usher, Savannah.
 Historian—Mrs. E. R. Harris, Winder.
 Parliamentarian—Mrs. J. M. Barnett, Albany.
 Editor—Mrs. W. A. Selman, Atlanta.

PUBLIC RELATIONS

Until recently, the medical profession has appeared quite oblivious of public opinion, apparently with the desire to show that criticism is as a rule too biased and ignorant to be worthy of notice. There is, however, a growing demand on the part of the public for explanation and oftentimes information in matters of health and it seems evident that if the medical profession does not stand ready to vindicate its stand upon certain questions of the day, its position will be attacked vigorously by other organized agencies; that if education and information on health matters are not sponsored by the profession, they will be supplied from unethical sources.

Much might be said regarding the duties and functions of committees appointed to sponsor contacts between organized medicine and society. It is enough to say that the association of medical men are sanctioning and eagerly awaiting the assistance of their auxiliaries in this work. In Georgia, the Advisory Committee of the Medical Association of Georgia, the State Board of Health and the Auxiliary Committees are working in harmony, with the one desire to create in the people of Georgia the habit of trusting the leadership of their doctors in affairs of personal and community health.

Every doctor, in turn, should honor the opportunity of leadership and every doctor's wife should feel a distinct responsibility in maintaining this leadership. Her responsibility is three-fold, personal, guild and social. In a personal way, she has many opportunities to interpret the ethical code of the doctor and to explain professional attitudes which are misunderstood in the community. It is a matter of local decision, of course, as to whether or not criticism shall be answered, but it seems apparent that with the widespread publicity given to hearsay it would be of immense value to the profession to take the trouble to get the facts. Frequently, if a doctor's wife has definite facts to offer, she could refute many tales that do untold damage to the medical profession.

What a responsibility to the guild of medicine, the doctor's wife assumed with her mar-

riage vows. Does she not remember the pride with which she saw *him* start off with the "little black bag" and the thrill of those first telephone calls? Perhaps her interest became too inquisitive and was frowned upon by his queer medical ethics—so hazy and difficult to understand at that time. Later, her horizon broadened until she could see that others were working with the same vision and the same ideals. Then came the opportunity—and at the same time the duty—open to every doctor's wife to become acquainted with the medical profession and its Auxiliary as a whole, to study their purpose, to penetrate the petty quarrels of individuals, to see the ideals of *leadership in health*.

It is with the acquisition of knowledge and sympathy that the doctor's wife is fitted for her social responsibility. Society as a whole is beginning to demand information on health: the doctor has been loath to deal with any but the sick. It is the wife who must act as intermediary. There are numbers of contacts which she makes as a matter of course and it is in these organizations that she can lead the public to the proper authority in the discussion of health. Personally, she has learned the "why" of the medical profession; as a guild supporter, she understands the "where" and now, she must become the "how".

MRS. E. A. BANCKER, JR.,
Chairman, Public Relations.

MACON MEETINGS

The Bibb County Medical Auxiliary was honored at its November meeting by the presence of our State President, Mrs. Bonar White.

Mrs. White spoke on the development of organization throughout the state, of her trips and the eagerness of some communities for knowledge on social hygiene, mother welfare and cancer.

Mrs. White returned to Macon a week later and spoke before the Sixth District Meeting of the P.-T. A.

Literature on cancer, social hygiene and mother welfare was distributed to those who attended this meeting.

(MRS. J. L.) GRACE KING
Publicity Chairman, Macon Auxiliary.

SEMI-ANNUAL REPORT

At the close of the first half of the fiscal year the Woman's Auxiliary to the Medical Association of Georgia reports that:

Georgia now has 30 Auxiliaries and four memberships at large representing 42 counties.

The Auxiliary is sympathetically guided by an Advisory Board of five. It has the committees recommended by the National Auxiliary plus Health Film and Student Loan committees. The latter is limited to families of physicians.

The program on Mother-Welfare outlined by the Advisory Committee and the President of the Medical Association of Georgia is actively being presented in all districts of Georgia, the State Auxiliary alone being responsible so far for programs in 66 counties. The local Auxiliaries have not been requested to report at this time. The program was approved as a part of the cooperative health work of the Georgia Congress of Parent-Teacher Associations, the Georgia Federation of Women's Clubs, the Georgia Federation of Business and Professional Women, the State League of Women Voters, the Director of Parental Education of the University of Georgia, the Public Health Nurses, the Red Cross and others. Letters of explanation were sent all local P.-T. A. and the public welfare and health chairmen of clubs. Some superintendents have asked for sets of the Auxiliary health talks for their schools. The Deputy Commissioner of Health has asked for ten sets for radio programs. The President of the Auxiliary is accompanying the chairman of the school of instruction of the Georgia Congress P.-T. A. giving the Mother Welfare program.

Permission was given to mimeograph 12 sets of health talks and 13,000 sets have been mimeographed; also 20,000 of the Mother Welfare pamphlets. Material and posters have been sent all district health education chairmen and local presidents. Fifty copies of "The Dog's Gift to the Relief of Suffering" have been obtained from the A. M. A. for Auxiliaries; the dissemination of such information is a request from the A. M. A. President and the A. M. A. Auxiliary. A. M. A. Study Envelopes (100) on Common Defects of Children and Their Correction were ordered, and are being placed with instructions for use. Copies of the letter of recommendation for the year to local presidents were sent to Dr. Richardson, Dr. Minchew, Dr. Ayers, and the officers and chairman of the state Auxiliary as well as "Our Tasks, 1933-1934" and the revised Constitution and By-Laws.

Twelve handbooks published by the National Auxiliary were bought and with four on hand lent to Dr. Richardson. Dr. Minchew, the state Auxiliary officers and chairman. Also copies of annual report of A. M. A. Auxiliary. Dr. Richardson kindly wrote to the presidents of all county and district medical societies stating the charge in educational work given to the Auxiliary and responses have encouraged the Auxiliary. Three new Auxiliaries have been organized and permission obtained to organize others.

The President has attended six district meetings and explained auxiliary functions for this year.

Permission was given for the Auxiliary to take charge of the preliminary organization work in seventeen counties of north Georgia for the Christmas Seal sale. The local auxiliaries in that section have arranged meetings and taken the lead in publicity and other preparations for the sale, which will be handled from the State Sanatorium. The proceeds of the sales in these seventeen counties will be pooled and spent to employ a district nurse to "round-up" cases from homes where there have been tuberculosis and where no medical care has been given. The suspects will be given the tuberculin tests and if necessary the x-ray and the results given to the family physician. The nurse will teach hygiene to the patients and to the family in order to break the line of communication of the disease.

Members have appeared before Grand Juries for the adoption of the Ellis Health Law; and assisted in showing a health film on social hygiene sponsored by the American Social Hygiene Association.

Educational material has been and still is being distributed for our public relations work. Each county president has been sent a set of three minute talks, copy of State Board of Health program, Minutes and Report of 11th annual meeting of A. M. A. Auxiliary, State Health Laws, Ellis Health Laws, A. M. A. Study Envelopes, and copies of "Our Tasks," Constitution and By-Laws, and Mother Welfare pamphlets for each member. Health posters have been given all districts.

Mrs. White is again accompanying the "Flying Squadron" of the Georgia Congress of the P.-T.A. to speak on health as outlined by our Advisory Committee. The encouraging thing about our program is that we are having many new requests for material and programs on Mother Welfare and that many who had such a program last year are asking for it again.

County Auxiliaries are busy with philan-

thropic work of many kinds, sewing layettes, sewing for the Red Cross, organizing home hygiene classes, serving as health chairmen for P.-T.A. clubs, and addressing meetings. At least twenty-three counties that have neither medical societies or Auxiliaries have had the Mother Welfare message and material distributed. The A. M. A. has given the Auxiliary twenty sets—ten each—of posters on maternal and infant care. The Tuberculosis Association has presented us with thirty sets of posters on personal hygiene. Any Auxiliary member may borrow these for a health program.

Important chairmanships in health are in charge of Auxiliary members: Including social hygiene for the State League of Women Voters, local leagues, Junior Red Cross and Georgia P.-T.A. Secretary of Georgia Workers for the Blind, District Health Committees for Federated Clubs, Mother Craft for Federated Clubs, Relief Committees, Presidents of P.-T.A., and other organizations, thus wielding an immense influence in molding public opinion along lines directed by the medical profession.

Six districts have met and adopted the uniform scrap-book in blue buckram with gold seal and lettering. Mrs. Hugo Johnson has given the state a new scrap-book similar to the district books, but larger.

The historian, Mrs. Harris, has sent an excellent outline for histories to all presidents and managers with directions for uniform records. The state has purchased the best rag paper on which the histories will be typed for the state and national records. A history book similar to the scrap-book, but loose-leaf, will contain the file of these histories.

The Auxiliary was included in the Summer Extension classes for physicians. This is the second year and members are missing a fine program who do not attend them.

Some Auxiliaries have given subscriptions to Hygeia for county schools and libraries. Many are planning health film programs.

Members are usually busy folks, but nearly everyone belongs to one or more organizations. If each member would ask at least one organization to have a Mother Welfare program, there would be no section lacking the valuable information about maternity. We are to serve the profession, and through the messages from the profession—the public. With transportation available, so that even in this large state a person may travel from one section to the other in a day, and bring not only himself, but his habits of health, we no longer rear our own safeguards in health. What the unknown and

unseen man or woman does may affect us. So that public health is our concern and the opportunity to teach hygiene unlimited. If there is any feeling of fellowship in our hearts for human beings, supporting the tasks of the Auxiliary, may be a personal satisfaction, also a spiritual pleasure.

EIGHTH DISTRICT MEETING

The semi-annual meeting of the Woman's Auxiliary to the Eighth District Medical Society was held in Valdosta, October 10th. Mrs. T. H. Clark of Douglas, District Manager, presided. Mrs. L. R. Scott delivered the invocation. Mrs. Walter Curtis of Sparks, the "Welcome"; and Mrs. B. O. Quillian of Douglas, responded.

Reports were given by Douglas, Ware, Coffee and Glynn County Auxiliaries.

Mrs. J. B. Penland, President-Elect, gave a pertinent address on organization. Dr. Gordon Crozier spoke on Public Health.

Lowndes County Auxiliary was organized with the following officers: Mrs. H. M. Tolleson of Hahira, president; Mrs. Conrad Williams of Valdosta, vice-president; Mrs. Albert Saunders of Valdosta, secretary-treasurer.

The new Eighth District officers elected were: Mrs. B. H. Minchew, Waycross, Manager; Mrs. Kenneth McCullough, Waycross, secretary-treasurer; Mrs. J. W. Simmons, Brunswick, vice-president; Mrs. Albert Saunders, Valdosta, parliamentarian.

A brief message on mother welfare was sent from the president of the State Auxiliary.

Following the business meeting luncheon was served by the Lowndes County Medical Society. The next meeting will be held in Douglas.

NEWS ITEMS

The Georgia Medical Society met on November 14th. The scientific program consisted of a symposium on cancer. Dr. Lee Howard, Savannah, read a paper entitled "Etiology and Histopathology of Cancer"; Dr. H. F. Sharpley, Jr., Savannah, "Symptoms and Diagnosis of Cancer"; Dr. Robert Drane, Savannah, "Treatment of Cancer by X-Ray and Radium"; Dr. Wm. H. Myers, Savannah, "Surgical Treatment of Cancer."

The Third District Medical Society met at Cordele on November 8th. Titles of papers on the scientific program were as follows: "Infantile Diarrhea with Special Reference to Treatment," Dr. C. Hall Farmer, Macon; "Malignancy of Capsula in Infant—Case Report," Dr. Herschel A. Smith, Americus; "Cancer of Rectum," Dr. Chas. C. Harrold, Macon; "Urinary Calculi," Dr. Willis P. Jordan, Columbus; "Report of Councilor," Dr. J. C. Patterson, Cuthbert. The members of the Crisp County Medical Society entertained the physicians and their wives at a banquet at the Suwanee Hotel.

The Jackson-Barrow Counties Medical Society met at the Winder Woman's Club room, Winder, on November 6th. Dr. A. A. Rogers, Commerce, read a paper on "Cancer."

Dr. Eugene E. Murphey, Augusta, was elected to the Board of Trustees of the University Hospital to succeed Dr. H. W. Shaw, deceased.

Dr. H. F. Sharpley, Jr., Savannah, spoke at a meeting of the Woman's Auxiliary to the Georgia Medical Society on "Mother Welfare." The meeting was held at the home of Mrs. Wm. H. Myers on November 3rd.

The Grady Hospital Staff Meeting was held on November 22nd. Dr. Frank K. Boland, Atlanta, discussed "Five-Year Cancer Cures in Negroes"; Dr. Geo. Fuller and D. Henry Poer, Atlanta, made a report of "Surgical Service"; Dr. Mark S. Dougherty and Dr. Pierotti, Atlanta, case report "Thrombocytopenic Purpura"; Dr. W. W. Anderson and Dr. Smith, report of cases from the "Department of Pediatrics." Dr. C. W. Strickler and Dr. Jack C. Norris, Atlanta, are President and Secretary, respectively.

Dr. Chas. H. Richardson, Macon, President of the Association, spoke before a meeting of the Georgia State Nurses' Association at Augusta, on November 9th.

The Georgia Relief Commission has completed arrangements to employ needy nurses to administer to the needs of the sick who are on the relief roll of the Federal Emergency Relief Administration. The scale of fees to be paid are as follows: One dollar for the first hour, 65 cents for each additional hour not to exceed three hours, or \$4.00 for an eight-hour day.

Dr. and Mrs. J. H. McClure, Cornelia, entertained the members of the Habersham County Medical Society and their wives on November 16th.

The Georgia Medical Society met on November 28th. Dr. M. J. Egan, Savannah, read a paper entitled "Cure of Recurrent, Ventral and Large Hernia by Ox Fascia Repair—Reports of Cases." The discussion was led by Dr. Wm. H. Myers and Dr. M. J. Epling. The members engaged in a general discussion of the physician's position in the NRA.

The staff of St. Joseph's Infirmary, Atlanta, met on November 28th. Dinner was served in the dining room at 6:30.

Dr. Ralph H. Chaney, Augusta, read a paper before the Tenth District Dental Society at Augusta on November 21st, entitled "Infections of the Mouth and Their Relation to Diseases of Other Parts of the Body."

The Spalding County Medical Society met at the Strickland and Son Memorial Hospital, Griffin, on November 21st. Physicians from the counties of Butts, Henry, Lamar, Pike and Upson were invited to attend the meeting. Dr. Lawson Thornton, Atlanta, read a scientific paper. The County Administrator for the Georgia Relief Commission was present and discussed medical care.

The Sixth District Medical Society met at Milledgeville, on December 6th. Titles of scientific papers on the program were as follows: "Hodgkin's Disease," Dr. Wm. M. Cason, Sandersville; "A Fracture Clinic," Dr. Richard Binion, Milledgeville; "Uses and Limitation of Salyrgan and Novasurol," Dr. W. W. Chrisman, Macon; "Psychiatric Clinic," Dr. Y. H. Yarbrough, Milledgeville; "Birth Injuries", Dr. Benjamin Bashinski, Macon; "Medical Aspect of the Acute Abdomen", Dr. Samuel C. Ketchin, Louisville; "The Acute Abdomen from the Surgical Viewpoint", Dr. F. B. Rawlings, Sandersville.

The Association of Seaboard Air Line Railway Surgeons met at St. Petersburg, Fla., on December 5, 6, 7. The Suwanee Hotel was headquarters. Dr. Stewart R. Roberts, Atlanta, read a paper entitled "The Congestive Heart Failure of Hypertension"; Dr. Frank Eskridge, Atlanta, "Remarks on Amputation." Georgia doctors who led discussions on other papers were: Dr. Thos H. Hancock, Atlanta; Dr. Chas. H. Richardson, Macon; Dr. J. G. Dean, Dawson; Dr. C. K. Sharp, Arlington; Dr. J. M. C. McAllister, Rochelle; Dr. B. T. Wise, Plains; Dr. Chas. E. McArthur, Cordele. Dr. Thos. H. Hancock, Atlanta, served as Second Vice-President, 1932-33; Dr. J. W. Palmer, Ailey, Secretary-Treasurer; Dr. Frank Eskridge, Atlanta, on the Executive Committee; Dr. J. G. Dean, Dawson, Committee on Necrology.

Dr. W. H. Powell, Lumber City, and Dr. J. M. Oliver Hazlehurst, have established the Cor De Lois Hospital at Hazlehurst. The outfit consists of a laboratory, x-ray, operating room and other modern conveniences for the diagnosis and treatment of diseases. In addition to the owners, there are seventeen of the leading physicians of Jeff Davis and adjoining counties on the hospital staff. Leading practitioners of almost every branch of medicine is represented on the staff. Six registered nurses are on the nursing staff and Miss Francis Knox is x-ray technician.

Dr. R. C. Swint, Milledgeville, was re-elected superintendent of the Milledgeville State Hospital at a meeting of the Board of Control held on November 17th.

Dr. Chas. C. Harrold, Macon, addressed the students of Wesleyan College, Macon, November 23rd, on "The History of This Part of the World before 1720." He dealt with the habits and lives of the Indians; acts by the French and Spaniards, and finally the work of the Englishmen.

The Walker County Medical Society at its meeting on November 3rd passed resolutions condemning "deadbeats" and agreed to render such medical service as might be necessary for worthy charity patients.

The Randolph County Medical Society met at Cuthbert on December 7th. Dr. A. L. Crittenden, Shellman; Dr. W. G. Elliott, Cuthbert, and Dr. T. F. Harper, Coleman, gave reports of cases. Dr. W. W. Crook, Cuthbert, retiring President, "Presidential Address."

Doctors E. J. and J. R. Smith, Hahira, entertained the members of the Lowndes County Medical Society at the Gold Leaf Hotel on November 14th. Dr. Frank Bird and Dr. J. M. Smith, Valdosta, were "after dinner speakers." Dr. Gordon T. Crozier, Valdosta, was Toastmaster.

Dr. D. M. Bradley and Dr. W. F. Reavis, Waycross, entertained the members of the Ware County Medical Society and their wives to dinner at the Okefenoke Golf Club on December 8th. Officers were elected for 1934.

Dr. W. H. Scruggs, formerly with the United States Marine Hospital, No. 11, at Louisville, Ky., has returned to his former home, Waycross, and opened offices for the private practice of medicine. He is especially interested in the diagnosis and treatment of tuberculosis.

The Emanuel County Medical Society met at Swainsboro on November 29th. Dr. R. C. Franklin, Swainsboro, discussed the Orr Treatment of Compound Fractures and Osteomyelitis; Dr. D. D. Smith, Swainsboro, read a paper on "Pyelitis in Pregnancy and Its Treatment—Case Report"; Dr. C. E. Powell, Swainsboro, "A Dislocated Elbow Joint without a Fracture in a Five-Year-Old Child—Case Report."

The management of the Franklin Hospital, Swainsboro, announces the association of Miss Mary Cornett, R.N., formerly with the Macon Hospital, as night supervisor.

Dr. I. Newton Kugelmass lectured on "Hemorrhagic Diseases in Infancy and Childhood" at the New York Polyclinic Medical School and Hospital, New York City, on December 19th.

Members of the Fulton County Medical Society were invited to hear the debate between students of the University of Georgia and Emory University on December 2nd at "Emory." "Resolved, That Georgia Should Adopt a System of Social Medicine."

Dr. D. S. Reese, Carrollton, has been elected to the Board of Trustees of the Georgia Baptist Hospital, Atlanta.

The Dooly County Medical Society met at the of-

fice of Dr. M. L. Malloy, Vienna, November 27th. Resolutions were passed to place the names of all people who had defaulted in the payment of their accounts to members of the society on a "black-list." The members will require "cash-on-call" from such people in the future.

The American College of Surgeons will hold its 1934 Annual Clinical Congress in Boston, Mass., October 15-19th.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on December 7th. Dr. Jno. W. Turner gave report of cases, "Cases of Hereditary Arthrodysplasia—A New Bone Disease"; Dr. O. D. Hall gave a clinical talk on "The Value of Radium as a Therapeutic Agent"; Doctors Hal M. Davison and Mason I. Lawrence read a paper entitled "The Treatment of Arthritis with the Clark Hyperpyrexator." The discussions were led by Doctors Harold Bowcock, Wm. A. Smith and Lawson Thornton.

The Crawford W. Long Memorial Hospital, Atlanta, in its October, 1933, Bulletin published a symposium on cancer: "The Curability of Cancer", by Dr. Frank K. Boland, Atlanta; "Carcinoma of the Prostate Gland", Dr. Edgar G. Ballenger, Dr. Omar F. Elder and Dr. Harold P. McDonald, Atlanta; "Diagnosis and Treatment of Uterine Cancer", Dr. J. J. Martin, Atlanta; "X-Radiation for Cancer—Case Report", Dr. A. J. Ayers and Dr. Wm. F. Lake, Atlanta. Dr. L. C. Fischer, Atlanta, discussed and illustrated "Cases of Temporary Relief of Apparently Hopeless Conditions of Cancer". In the Hospital's June, 1933, Bulletin Dr. L. C. Fischer discussed "Some of the Reasons for the Criticism We Receive"; Drs. E. G. Ballenger, O. F. Elder and H. P. McDonald, "Two-Way Resection of Very Large Prostates—A Preliminary Report"; Drs. Calhoun McDougall and Edwin S. Wright, "Diagnosis of Foreign Bodies in the Air and Food Passages"; Dr. Frank K. Boland, "A Plea for Earlier Diagnosis of Carcinoma of the Colon".

The American Heart Association, in its December, 1933, Bulletin announces that the Bulletin will be published quarterly in the future instead of bi-monthly. The second edition of the "Directory of Heart Associations, Committees, Convalescent Homes and Cardiac Clinics in the United States and Canada" will be distributed in the spring of 1934. The Tenth Annual Meeting of the Association will be held on February 5, 1934, at the offices of the Association in the Nelson Tower, New York City.

The Fulton County Medical Society met at the Academy of Medicine, Atlanta, on December 21st. The program consisted of "Applications for Membership", "Annual Message of the Retiring President and Discussion", "Reports of Officers and Committees",

"Memorial Services for Members Who Died During the Current Year", "Miscellaneous Business" and "Election of Officers".

Dr. Wm. C. Williams, Jr., announces the opening of offices at 517-8 Bibb Building, Macon. Practice will be limited to urology.

The Georgia Medical Society (Chatham County) held its 130th annual meeting on December 12th. The program consisted of annual reports by the officers and chairmen of committees. Officers were elected for 1934.

Dr. B. W. Greene, Macon, has been elected city physician by the city council of Macon; Dr. Jas. T. Ross, Macon, assistant city physician.

Dr. V. H. Bassett, Savannah, spoke before a meeting of the Medical History Club at Charleston, S. C., on December 7th. He displayed an exhibit prepared by the Georgia Medical Society which was used in the program of the celebration of the Bicentennial of Georgia at Savannah. Dr. Bassett spoke of the public service rendered by doctors of Savannah in the promotion of public health, civic and political affairs.

The staff meeting of the Crawford W. Long Memorial Hospital, Atlanta, was held in the dining room of the institution on December 14th. Dr. R. T. Dorsey, Atlanta, discussed "Post-Operative Treatment". Dinner was served at 6:00 P.M.

The staff meeting of Grady Hospital, Atlanta, was held in the lecture room of the colored unit on December 12, 1933. Dr. E. S. Byrd, Atlanta, reported a case for diagnosis, a white man, age 27, "Abdominal Complaint"; Dr. J. L. Campbell and Dr. Jack C. Norris, gave a report of differential study and diagnosis of a "Tumor of the Jaw"; Dr. Roy R. Kracke, Emory University, illustrated with lantern slides a report of "Work on Granulopenia".

The Clinical Society of the Piedmont Hospital, Atlanta, met in the hospital's dining room on December 11th. Dr. W. F. Shallenberger, Atlanta, gave a case report, "Resection of Kidney".

The officers of the Macon Hospital announce the appointment of junior members of the staff as follows: *Surgery*—Dr. H. G. Weaver, Dr. Thomas Harold and Dr. Leon D. Porch. *Medicine*—Dr. J. M. Keiser and Dr. H. C. Atkinson. *Obstetrics*—Dr. J. B. Kay, Byron. *Gynecology*—Dr. W. E. Mobley and Dr. A. P. Evans. *Genito-Urinary*—Dr. W. R. Golsan and Dr. W. W. Meriwether. *Eye, Ear, Nose and Throat*—Dr. R. W. Richardson. *Tuberculosis*—Dr. A. P. Evans and Dr. L. L. Rawls.

Dr. Lewis M. Gaines, Atlanta, has been elected President of Emory University Hospital Staff; Dr.

Lon Grove, Atlanta, Vice-President; and Dr. J. D. Martin, Atlanta, Secretary.

The Tri Medical Society, composed of Calhoun, Early and Miller counties, met at Blakely on December 13th. Officers were elected for 1934.

OBITUARY

Dr. Henry William Shaw, Augusta; member; Johns Hopkins University School of Medicine, Baltimore, Md., 1905; aged 51; died at the University Hospital, Augusta, October 27, 1933. While keenly interested in civic affairs, politics and his profession, he was devoted to his home and family. Dr. Shaw was a member of the State Board of Control and was always anxious to improve the facilities of the Milledgeville State Hospital and the State School for Feeble-minded at Gracewood, to better care for the state's wards in the institutions. He was one of the prime factors in the establishment of the school at Gracewood. Dr. Shaw entered into many political campaigns for his friends, took victory or defeat as a good sportsman, yet he never sought public office for himself. He was formerly a member of the State Board of Health, Richmond County Board of Health, Trustee of the Scottish Rite Hospital, Decatur; Federal government physician for prisoners at Augusta, city physician of Augusta. Surviving him are his widow, and one son H. W. Shaw, Jr. Funeral services were conducted from the St. James Methodist Church by Rev. J. W. Quillian. Interment was in Magnolia cemetery.

Dr. Nathaniel Pierce Walker, Milledgeville; member; University of Georgia Medical Department, Augusta, 1901; aged 53; died at his home on November 20, 1933. He was a native of Putnam county. Dr. Walker received his literary education at Emory University, Oxford. Immediately after he graduated in medicine, he began as an interne at the Milledgeville State Hospital, later elected to the staff where he served for thirty-two years. He was interested in the treatment of mental and nervous diseases and recognized as one of the leading psychiatrists of the south. Dr. Walker instituted occupational therapy in the hospital as a treatment of certain types of mental diseases. His success in this work was so great that many other similar institutions adopted the plan. Surviving him are his widow and one son, N. P. Walker, a student at the University of Georgia. Rev. Frank Quillian and Rev. John Yarbrough conducted the funeral services from the Milledgeville Methodist church. Officers and members of the staff of the Milledgeville State Hospital were pallbearers and acted as an honorary escort.

Dr. John Hardeman Heard, Macon, R. F. D. 3; Jefferson Medical College, Philadelphia, 1881; aged 78; died at his home on November 1, 1933. He was a native of Bibb county and a retired physician. Dr. Heard was formerly Chairman of the Board of Commissioners of Bibb county and a member of the

Board of Education. He devoted much of his time to farming and was quite successful. His contributions to public welfare were recognized by all who knew him. He was a man of sterling ability and integrity. Surviving him are his widow and a number of children, nephews and nieces. Funeral services were conducted from the Sardis Baptist church. Burial was in the Macon cemetery.

Dr. George R. Wells, Monroe; member; Emory University School of Medicine, Emory University, 1892; aged 65; died at the Walton County Hospital, Monroe, on November 26, 1933. He was born and reared at Stone Mountain. After graduating in medicine, he began practice at Monroe and for more than thirty years was one of the outstanding practitioners in Walton county. Dr. Wells possessed a kind and charitable disposition with his genial personality, he acquired the esteem of hundreds of people. He was a member of the Walton County Medical Society, American Medical Association, and the First Baptist Church of Monroe. Surviving him are one son, Willis Wells, Monroe; three sisters and three brothers. Funeral services were conducted from the First Baptist church by Dr. James Clarke, Pastor. Burial was in the city cemetery of Stone Mountain.

Dr. Thomas M. McIntosh, Thomasville; Emory University School of Medicine, Emory University, 1875; aged 80; died of heart disease on December 4, 1933. For many years he was one of the best known physicians of South Georgia, had an extensive practice, and was held in high esteem by many people in Thomas and adjoining counties.

HONOR ROLL FOR 1933

1. Monroe County, Dr. G. H. Alexander, Forsyth, January 18, 1933.
2. Henry County, Dr. H. C. Ellis, McDonough, April 10, 1933.
3. Lamar County, Dr. J. M. Rogers, Barnesville, April 12, 1933.
4. Chattooga County, Dr. H. D. Brown, Summerville, April 18, 1933.
5. Campbell County, Dr. A. J. Green, Union City, May 2, 1933.
6. Franklin County, Dr. B. T. Smith, Carnesville, May 3, 1933.
7. Dougherty County, Dr. I. M. Lucas, Albany, May 12, 1933.
8. Hall County, Dr. W. R. Garner, Gainesville, June 21, 1933.
9. Hancock County, Dr. H. L. Earl, Sparta, September 30, 1933.
10. Whitfield County, Dr. H. J. Ault, Dalton, August 9, 1933.
11. Stewart-Webster Counties, Dr. J. M. Kenyon, Richland, September 30, 1933.
12. Turner County, Dr. J. H. Baxter, Ashburn, October 24, 1933.

13. Toombs County, Dr. W. W. Odom, Lyons, October 30, 1933.

14. Tattnall County, Dr. J. M. Hughes, Glennville, November 2, 1933.

15. Randolph County, Dr. G. Y. Moore, Cuthbert, December 12, 1933.

HONOR ROLL FOR 1934

1. Randolph County, Dr. G. Y. Moore, Cuthbert, December 12, 1933.

SOUTHERN MEDICAL ASSOCIATION RICHMOND MEETING

The Twenty-Seventh Annual Session of the Southern Medical Association was held at Richmond, Va., November 14-17. This was the most successful session held since the depression started. The total attendance for the four days was 2,435; 1,650 physicians, 360 ladies, 275 medical students, and 150 exhibitors. The attendance from Georgia was 88 physicians and 31 ladies.

The scientific program was one of the best that has ever been given.

The next meeting will be held in San Antonio, Texas, November, 1934.

Officers elected for 1933-34 were as follows:

President—Dr. H. Leslie Moore, Dallas, Texas.

First Vice-President—Dr. Fred M. Hodges, Richmond, Va.

Second Vice-President—Dr. Thos. M. Groover, Washington, D. C.

Chairman of the Council—Dr. Frank K. Boland, Atlanta.

Chairman of the Board of Trustees—Dr. Seale Harris, Birmingham, Ala.

President-Elect of the Woman's Auxiliary to the Southern Medical Association—Mrs. J. Bonar White, Atlanta.

Georgia Physicians Who Are Section Officers

Dr. M. Hines Roberts, Atlanta, Section on Pediatrics.

Dr. W. W. Young, Atlanta, Chairman, Section on Neurology and Psychiatry.

Dr. Daniel C. Elkin, Atlanta, Chairman, Section on Surgery.

Dr. John W. Turner, Atlanta, Chairman, Section on Gynecology.

Dr. J. W. Palmer, Ailey, Secretary, Section on Railway Surgery.

Dr. Dunbar Roy, Atlanta, Chairman, Section on Ophthalmology and Otolaryngology.

Dr. Montague L. Boyd, Atlanta, Chairman, Section on Urology.

Scientific Exhibits by Georgia Physicians

Dr. Roy R. Kracke, Emory University, "Monocytic Leukemia: a general review with microscopic preparations from twenty cases, (Material assembled from the Hemagological Registry of the American Society of Clinical Pathologists)."

(Continued on Page 475)

OFFICERS AND COMMITTEES OF THE MEDICAL ASSOCIATION OF GEORGIA 1933-1934

EIGHTY-FIFTH ANNUAL SESSION—AUGUSTA
MAY 8, 9, 10, 11, 1934

OFFICERS

President.....	Chas. H. Richardson, Macon
President-Elect.....	Clarence L. Ayers, Toccoa
First Vice-President.....	Jos. D. Applewhite, Macon
Second Vice-President.....	W. W. Turner, Nashville
Secretary-Treasurer.....	Allen H. Bunce, Atlanta
Parliamentarian.....	John W. Simmons, Brunswick

DELEGATES TO THE A. M. A.

William H. Myers, (1933-4).....	Savannah
Alternate, Wm. A. Mulherin.....	Augusta
C. W. Roberts (1933-4).....	Atlanta
Alternate, M. C. Pruitt.....	Atlanta
Olin H. Weaver (1934-5).....	Macon
Alternate, C. K. Sharp.....	Arlington

COUNCIL

J. A. Redfearn, Chairman.....	Albany
Grady N. Coker, Clerk.....	Canton

Councilors

1. C. Thompson (1936).....	Millen
2. J. A. Redfearn (1936).....	Albany
3. J. C. Patterson (1936).....	Cuthbert
J. Cox Wall (1935) (old 12th).....	Eastman
4. Kenneth S. Hunt (1936).....	Griffin
5. W. A. Selman (1934).....	Atlanta
6. H. G. Weaver, (1934).....	Macon
7. M. M. McCord (1934).....	Rome
8. J. E. Penland (1934).....	Waycross
9. Grady N. Coker (1935).....	Canton
10. H. M. Fullilove (1934) (old 8th).....	Athens
S. J. Lewis (1935).....	Augusta

Vice-Councilors

1. Jas. C. Metts (1936).....	Savannah
2. Chas. H. Watt (1936).....	Thomasville
3. J. Cox Wall (1936).....	Eastman
4. Enoch Callaway (1936).....	LaGrange
5. Marion C. Pruitt (1934).....	Atlanta
6. H. D. Allen (1934).....	Milledgeville
7. W. H. Perkinson (1934).....	Marietta
8. K. McCullough (1934).....	Waycross
9. J. K. Burns (1935).....	Gainesville
10. M. A. Hubert (1934).....	Athens

COMMITTEES

Scientific Work

William R. Houston, Chairman (1934).....	Augusta
Joseph Yampolsky (1935).....	Atlanta
S. T. R. Revell (1936).....	Louisville
Allen H. Bunce, Secretary-Treasurer.....	Atlanta

Public Policy and Legislation

Dan Y. Sage, Chairman (1934).....	Atlanta
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A. R. Rozar (1936).....	Macon
Allen H. Bunce, Secretary-Treasurer.....	Atlanta
T. F. Abercrombie, Director, Department of Public Health, State of Georgia.....	Atlanta

Medical Defense

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J. O. Elrod (1936).....	Forsyth
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R. H. Oppenheimer, Chairman (1937).....	Atlanta
K. McCullough (1934).....	Waycross
Geo. F. Klugh (1935).....	Atlanta
Arthur D. Little (1936).....	Thomasville
D. Henry Poer (1938).....	Atlanta

Abner Wellborn Calhoun Lectureship

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H. I. Reynolds (1934).....	Athens
Eugene E. Murphy (1935).....	Augusta
Craig Barrow (1936).....	Savannah
Frank K. Boland (1937).....	Atlanta

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R. M. Harbin, Chairman (1934).....	Rome
Wm. A. Mulherin (1935).....	Augusta
C. L. Ridley (1936).....	Macon
Dan Y. Sage (1937).....	Atlanta
C. W. Roberts (1938).....	Atlanta
Mrs. J. Bonar White, President, Woman's Auxiliary, Ex-Officio.....	Atlanta

Necrology

A. J. Mooney, Chairman.....	Statesboro
T. J. McArthur.....	Cordele
G. Y. Moore.....	Cuthbert

Medical History of Georgia

Frank K. Boland, Chairman (1937).....	Atlanta
William R. Dancy.....	Savannah
Arthur G. Fort.....	Atlanta

Crawford W. Long Memorial Prize

William R. Dancy, Chairman.....	Savannah
Stewart R. Roberts.....	Atlanta
V. P. Sydenstricker.....	Augusta
George Bachmann.....	Atlanta
Edgar R. Pund.....	Augusta

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William H. Myers.....	Savannah
Chas. H. Watt.....	Thomasville
G. Y. Moore.....	Cuthbert
Emory R. Park.....	LaGrange
Chas. C. Harrold.....	Macon
R. M. Harbin.....	Rome
Albert F. Saunders.....	Valdosta
Grady N. Coker.....	Canton
G. T. Bernard.....	Augusta

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Jas. N. Brawner.....	Atlanta
Ralston Lattimore.....	Savannah
Jas. L. King.....	Macon
Chas. A. Greer.....	Oglethorpe

Fraternal Delegate to the Georgia Pharmaceutical Association

C. L. Ridley.....	Macon
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Fraternal Delegate to the Georgia Dental Association

C. Hall Farmer.....	Macon
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Fraternal Delegates to Other State Meetings

To visit Alabama: F. B. Blackmar, Columbus; O. W. Roberts, Carrollton.
To visit Florida: Arthur G. Fort, Atlanta; J. M. Smith, Valdosta.
To visit North Carolina: C. W. Roberts, Atlanta; D. D. Walker, Macon.
To visit South Carolina: Thos. M. Adams, Monte- zuma; Robt. L. Rhodes, Augusta.
To visit Tennessee: W. W. Chrisman, Macon; M. M. McCord, Rome.

Directory of the Medical Association of Georgia for 1933

Names of all members and officers are published as corrected by Secretaries of county societies.

BALDWIN COUNTY

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Delegate Echols, Geo. L.
Alternate Delegate Longino, L. P.

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Echols, Geo. L., Hardwick
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Garrard, J. I., Milledgeville
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Langston, M. F., Milledgeville (Hon.)
Longino, L. P., Hardwick
Moran, O. F., Milledgeville
Rankin, D. T., Hardwick
Scott, W. M., Milledgeville
Swint, R. C., Milledgeville
Wheeler, G. A., Milledgeville (Hon.)
Wood, O. C., Milledgeville
Yarbrough, Y. H., Milledgeville

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Alternate Delegate Stanford, J. W.

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Bradford, H. B., Pine Log
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Ellis, Chas. L., Kingston
Griffin, W. C., Cartersville
Horton, A. L., Cartersville
Howell, S. M., Cartersville
Lowry, T., Cartersville
McGowan, H. S., Cartersville
Murdock, J. L., Emerson (Hon.)
Shamblin, A. C., Cartersville
Stanford, J. W., Cartersville
Wofford, W. E., Cartersville

BEN HILL COUNTY

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Sec'y.-Treas. Osborne, L. S.
Delegate Osborne, L. S.

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Dorminy, W. D., Fitzgerald

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McMillan, J. E., Fitzgerald
Osborne, L. S., Fitzgerald (Hon.)
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Ware, R. M., Fitzgerald
Willis, G. W., Ocilla

BIBB COUNTY

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Alternate Delegate Webb, Fred L.

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Anderson, C. L., 700 Spring St., Macon
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Harrold, Thos., 700 Spring St., Macon

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Kay, J. B., Byron
Keen, O. F., Oglethorpe Infirmary, Macon
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Kemp, A. P., The Clinic, Macon
King, J. L., Grand Bldg., Macon
Martin, J. W., Bibb Bldg., Macon
Massenburg, G. Y., The Clinic, Macon
McAfee, L. C., Bibb Bldg., Macon
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Richardson, R. W., Georgia Casualty Bldg., Macon
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Thompson, O. R., 700 Spring St., Macon
Walker, C. H., 617 Mulberry St., Macon
Walker, D. D., 700 Spring St., Macon
Ware, Ford, 700 Spring St., Macon
Wasden, C. N., Georgia Casualty Bldg., Macon
Watson, O. O., The Clinic, Macon
Weaver, H. G., 700 Spring St., Macon
Weaver, O. H., 700 Spring St., Macon
Webb, F. L., Fort Oglethorpe

Williams, W. A., Georgia Casualty
Bldg., Macon

Wright, J. E., 324 College St., Macon

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Mooney, A. J., Statesboro
McElveen, J. M., Brooklet
Olliff, H. H., Register
Patrick, J. Z., Pulaski
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McCarver, W. C., Vidette
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Sutton, W. H., Midville

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Vice-President _____ Camp, R. T.

Secretary-Treasurer _____ Green, A. J.

Delegate _____ Camp, R. T.

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Camp, R. T., Fairburn
Camp, W. R., Fairburn
Green, A. J., Union City

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Fitts, C. C., Carrollton
Goodwyn, H. J., Carrollton
Griffis, J. C., Burwell (Hon.)
King, O. D., Bremen
Powell, B. C., Villa Rica
Powell, J. E., Villa Rica
Reese, D. S., Carrollton
Roberts, O. W., Carrollton
Scales, S. F., Carrollton, R. 1
Smith, W. P., Bowdon
Styles, O. R., Bowdon
Wortham, A. G., Centralhatchee

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Bassett, V. H., City Hall, Savannah
Bedingfield, W. O., 7 W. Gordon St.,
Savannah
Blake, H. H., 408 Abercorn St., Savan-
nah
Blitch, J. R., Ellabell (Hon.)
Bray, S. E., DeRenne Apartments, Sa-
vannah
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Charlton, T. J., 220 East Oglethorpe
Ave., Savannah
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vannah
Compton, H. T., 14 East Taylor St.,
Savannah
Corson, E. R., 10 West Jones St.,
Savannah
Crawford, W. B., 14 East Taylor St.,
Savannah
Dancy, Wm. R., 102 West Jones St.,
Savannah
Daniel, Jno. W., Jr., 114 E. Jones St.,
Savannah
Daniel, Jno. W., 14 East Jones St.,
Savannah
DeCaradeuc, St. J. R., DeRenne
Apartments, Savannah
DeLoach, L. A., 15 East Jones St.,
Savannah
Demmond, E. C., DeRenne Apartments,
Savannah

Drane, Robert, DeRenne Apartments,
Savannah

Dunn, L. B., 201 East York St., Savan-
nah

Edwards, D. B., 606 Drayton St.,
Savannah

Egan, M. J., 210 E. Liberty St.,
Savannah

Elliott, J. L., Hotel DeSoto, Savannah
Epting, M. J., 20 E. Jones St.,
Savannah

Exley, H. T., 116 East Jones St., Sa-
vannah

Faggart, G. H., 14 W. Oglethorpe Ave.,
Savannah

Graham, R. E., 9 West Gordon St.,
Savannah

Harris, R. V., 120 E. Hall St.,
Savannah (Hon.)

Heriot, Geo. W., Jr., 116 West Jones St.,
Savannah

Hesse, H. W., 112 E. Jones St.,
Savannah

Holton, C. F., 19 East Gordon St.,
Savannah

Iseman, E., 103 E. Jones St., Savannah
Kandel, H. M., 213 East Gaston St.,
Savannah

Johnson, G. H., 116 East Oglethorpe
Ave., Savannah

Jones, Jabez, DeRenne Apartments,
Savannah

Jones, J. P., 109 East Jones St., Savan-
nah

Lang, G. H., 204 East Liberty St., Sa-
vannah

Lattimore, Ralston, 2 E. Jones St.,
Savannah

Lee, Lawrence, DeRenne Apartments,
Savannah

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Savannah

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 West, C. M., Candler Bldg., Atlanta
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 Westmoreland, W. F., 417 Tenth St., N.E., Atlanta (Hon.)
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 Wiggins, L. W., Atlanta National Bank Bldg., Atlanta
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 Wilson, R. B., 478 Peachtree St., N.E., Atlanta

Winchester, M. E., State Capitol,
Atlanta
Wood, R. Hugh, Medical Arts Bldg.,
Atlanta
Woodland, J. C., Gorgas Hospital,
Ancon, Canal Zone (Asso.)
Wright, E. S., Medical Arts Bldg.,
Atlanta
Yampolsky, Joseph, 478 Peachtree St.,
N.E., Atlanta
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Atlanta
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Greer, C. B., Brunswick
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Reynolds, A. B., Cairo
Rogers, J. V., Cairo
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Atlanta

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Delegate.....Lamb, R. B.
Alternate Delegate.....Garrison, W. H.

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Joseph, Kelly N., Alto
Lamb, E. H., Demorest
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McClure, J. H., Cornelia (deceased)
Schenck, H. C., State Capitol, Atlanta
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Delegate.....Whelchel, C. D.
Alt. Delegate.....Wellborn, C. J.

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Alternate Delegate.....Pilcher, Jno. J.

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Holmes, Walter P., Wadley
Kelley, J. O., Avera

Ketchin, S. C., Louisville
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 Peacock, J. D., Wadley
 Pilcher, John J., Wrens
 Revell, S. T. R., Louisville

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 Delegate.....Thompson, C.
 Alternate Delegate.....Lunsford, G. G.

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 Jones, J. M., Thrift (Asso.)
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JOHNSON COUNTY**Member**

Bray, H. B., Wrightsville

JONES COUNTY**Officer**

Sec'y.-Treas.....Zachary, J. D.

Members

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 Alternate Delegate.....Banister, H. G.

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 Columbus
 Blanchard, Mercer, Swift Bldg., Co-
 lumbus
 Bush, John, Doctors Bldg., Columbus
 Carter, Curtis B., 1545 Third Ave.,
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 Dillard, Guy J., Murrah Bldg., Co-
 lumbus
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Gilliam, O. D., Doctors Bldg., Columbus
Griffith, R. P., 1346 Third Ave.,
Columbus
Hudson, B. B., 1310 Broadway,
Columbus
Jenkins, W. F., City Hospital,
Columbus
Johnson, J. H., Murrah Bldg.,
Columbus
Jones, Wm. R., 1310 Broadway,
Columbus
Jordan, W. P., Doctors Bldg., Columbus
Mahaney, J. H., Woolworth Bldg.,
Columbus
Mathews, J. H., 1310 Broadway,
Columbus
Mayher, W. E., City Hospital,
Columbus
McDuffie, J. H., Jr., Masonic Temple,
Columbus
McDuffie, J. H., Sr., Masonic Temple,
Columbus (Hon.)
Moses, Alice, 1077 Colorado Boulevard,
Denver, Colorado
Murray, G. S., Swift Bldg., Columbus
Peacock, C. A., Murrah Bldg., Colum-
bus
Schley, Francis B., Swift Bldg.,
Columbus
Thompson, J. B., Swift Bldg.,
Columbus
Willis, J. N., Swift Bldg., Columbus
Winn, J. H., Swift Bldg., Columbus
Wooldridge, J. C., Murrah Bldg.,
Columbus
Younans, J. R., 1140½ Broad St.,
Columbus

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Travis, W. D., Covington
Waites, S. L., Covington
Wilson, Pleas, Newborn

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Alternate Delegate _____ Massey, W. F.

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Bush, Albert R., Hawkinsville
Coleman, W. A., Eastman
Massey, W. F., Chester
Maloy, Jim W., Rhine
Parkerson, I. J., Eastman
Pirkle, W. H., Cochran
Powell, John F., Gresston (Hon.)
Smith, Ernest L., Eastman
Wall, J. C., Eastman
Whipple, R. L., Cochran
Williamson, J. G., Rhine
Yawn, B. W., Eastman

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Vice-President _____ White, Geo. M.
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Delegate _____ Wood, C. V.

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Cooper, J. J., Cedartown
Good, John W., Cedartown
McBryde, T. E., Rockmart
Perkins, H. R., Rockmart
White, Geo. M., Rockmart
Whitely, S. L., Cedartown
Williams, C. W., Cedartown
Wood, C. V., Cedartown

PUTNAM COUNTY Member

Griffith, E. F., Eatonton

RABUN COUNTY Member

Green, J. A., Clayton

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Vice-President _____ Crittenden, A. L.
Sec'y.-Treas. _____ Moore, G. Y.
Delegate _____ McCurdy, E. C.

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(Hon.)
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Carter, Geo., Bluffton (Hon.)
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Elliott, W. G., Cuthbert
Gary, Loren, Georgetown
Harper, T. F., Coleman
Martin, F. M., Shellman
McCurdy, E. C., Shellman
Moore, G. Y., Cuthbert
Patterson, F. D., Jr., Ames, Iowa.
(Asso.)
Patterson J. C., Cuthbert
Rogers, F. S., Coleman
Saurez, Annette McD., Cuthbert (Hon.)
Shelley, W. P., Albany (Hon.)
Terry, Wm. R., Shellman (Hon.)
Wimberly, William, Ft. Gaines (Hon.)

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Alternate Delegate _____ Gray, J. D.
Alternate Delegate _____ Sherman, J. H.

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Bldg., Augusta
Battey, W. W., Jr., 428 Sixth St.,
Augusta
Bedingfield, W. R., Southern Finance
Bldg., Augusta
Bernard, G. T., 203 Thirteenth St.,
Augusta
Blanchard, C. A., 926 Broad St.,
Augusta
Blanchard, P. G., Appling
Brittingham, Jno. W., Doctors Bldg.,
Augusta
Brown, T. P., Marion Bldg., Augusta
Bryans, C. I., Southern Finance Bldg.,
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Burpee, C. M., University Hospital
Augusta

Butler, J. H., Southern Finance Bldg.,
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Chaney, R. H., 1001 Greene St.,
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Crane, C. W., 1345 Greene St., Augusta
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Bldg., Augusta
Crichton, Robt. B., Southern Finance
Bldg., Augusta
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Augusta
Eve, H. J., 619 Greene St., Augusta
Gibson, C., Thomson
Goodrich, W. H., Southern Finance
Bldg., Augusta
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Hensley, E. A., 1812 Watkins St.,
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Holmes, L. P., Southern Finance Bldg.,
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(Hon.)
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Georgia Medical Dept., Augusta
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Kilpatrick, Chas. M., 1345 Greene St.,
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Lewis, S. J., Southern Finance Bldg.,
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Medical Dept., Augusta
Mosteller, Ralph, Medical College,
Augusta
Mountain, G. W., 2612 Walton Way,
Augusta
Mulherin, F. X., Shirley Apts.,
Augusta
Mulherin, Wm. A., Shirley Apartments,
Augusta
Murphey, E. E., 432 Telfair St., Augusta
Oden, J. W., Gracewood
Oertel, T. E., Southern Finance Bldg.,
Augusta (deceased)
Oetjen, LeRoy H., 763 Broad St.,
Augusta
Page, Hugh N., Southern Finance Bldg.,
Augusta
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Bldg., Augusta
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Augusta
Price, W. T., Montgomery Bldg.,
Augusta
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Augusta
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Sherman, John H., 1122 Johns Road,
Augusta
Sydenstricker, V. P., University Hos-
pital, Augusta

Tessier, L. P., Masonic Temple,
Augusta
Thomas, D. R., Jr., University Hos-
pital, Augusta
Thurmond, J. W., 407 Seventh St.,
Augusta
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Hospital, Valley Station, Ky.
Taylor, Geo. A., Southern Finance
Bldg., Augusta
Ward, C. D., 1345 Greene St., Augusta
Weeks, J. L., Harlem
Weeks, Richard B., Southern Finance
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Downing, E. E., Newington
Lanier, L. F., Sylvania
Lovett, W. R., Sylvania
Mims, S. W., Sylvania
Rushing, W. E., Millhaven
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Austin, W. H., Griffin
Copeland, H. J., Griffin
Copeland, H. W., Griffin
Drewry, T. E., Griffin (Hon.)
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Forrer, D. A., Griffin
Frye, A. H., Griffin
Griffith, C. F., Griffin
Grubbs, J. H., Molena
Hawkins, T. I., Griffin
Head, D. L., Zebulon
Head, Marvin M., Zebulon
Howard, I. B., Williamson
Humphries, W. C., Griffin
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Alternate Delegate _____ Isbell, J. E. D.

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Chaffin, E. F., Toccoa
Edge, J. H., Toccoa (Hon.)
Heller, W. B., Toccoa
Isbell, J. E. D., Toccoa
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Terrell, J. H., Toccoa

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Delegate _____ Kenyon, J. M.
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Grier, R. L., Lumpkin
Kenyon, J. M., Richland
Lunsford, J. F., Preston (Hon.)
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Miller, T. B., Richland (Hon.)
Pickett, C. E., Richland
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Cato, F. L., DeSoto (Hon.)
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Jordan, J. R., Ellaville
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Logan, J. C., Plains
McMath, J. F., Americus (Hon.)
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Prather, W. S., Americus
Primrose, A. C., Americus
Scruggs, S. A., Americus
Smith, Herschel A., Americus
Stukes, J. T., Americus
Wise, B. T., Americus
Wise, S. P., Americus
Wood, Kenneth, Leslie

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Sec'y.-Treas. _____ Leonard, W. P.

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Leonard, W. P., Talbotton
Peeler, J. E., Woodland

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Sec'y.-Treas. _____ Rhodes, Jno. A.

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Hughes, J. M., Glennville
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Kennedy, J. J., Collins (Hon.)
Kicklighter, R. B., Glennville
Rountree, M. A., Reidsville
Smith, S. F., Glennville
Strickland, L. V., Cobbtown
Tootle, G. W., Glennville
Walling, C. B., Collins

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Delegate _____ Beason, Lewis
Alternate Delegate _____ Montgomery, R. C.

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Bryan, S. H., Reynolds
Hind, J. C., Cleveland, Ohio (Hon.)
Liggin, Samuel B., Reynolds
Montgomery, R. C., Butler

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Delegate _____ Mann, F. R.
Alternate Delegate _____ Collum, O. F.

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Collum, O. F., McRae
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Fussell, T. D., Rhine, R. F. D.
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Harbin, F. P., Lumber City
Jones, A. J., Jacksonville
Kennon, B. M., McRae
Maloy, C. J., Helena
Maloy, D. W. F., Milan
Mann, Frank R., McRae
Martin, S. W., Hazlehurst
McMillan, Thos. J., Milan
Neal, J. W., Scotland
Oliver, J. M., Hazlehurst
Powell, Harry, Hazlehurst
Youmans, C. R., Lumber City

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Delegate _____ Kenyon, S. P.

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Dean, J. G., Dawson
Kenyon, S. P., Dawson
Lewis, J. H., Dawson
Thomas, Logan L., Dawson (Hon.)
(deceased)

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Delegate _____ Wall, C. K.
Alt. Delegate _____ Watt, C. H.

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Austin, G. L., Pavo
Bell, Rudolph, New York Hospital,
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Erickson, Mary J., Thomasville
Ferguson, C. H., Thomasville
Garrett, J. A., Meigs
Glover, G. B., Monticello, Fla. (Hon.)
Hill, Roy A., Thomasville
Isler, J. N., Meigs
Jarrell, W. W., Thomasville
Jenkins, H. B., Thomasville
King, J. T., Thomasville
Little, A. D., Thomasville
Moore, H. M., Thomasville
Reid, Jas. W., Thomasville

Sanchez, S. E., Barwick
 Vann, H. A., Boston (Hon.)
 (deceased)
 Wahl, Ernest F., Thomasville
 Wall, C. K., Thomasville
 Watt, C. H., Thomasville
 Williams, J. F., Monticello, Fla. (Hon.)

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 Sec'y.-Treas. Fleming, Carlton A.

Members

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 Evans, E. L., Tifton
 Fleming, C. A., Tifton
 Harrell, D. B., Tifton
 Hendricks, W. H., Tifton
 Peterson, N., Tifton
 Pittman, Carl S., Tifton

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 Findley, C. W., Vidalia
 Hall, J. K., Lyons
 McDermid, H. C., Vidalia
 Meadows, John M., Vidalia (Hon.)
 Mercer, J. E., Vidalia
 Odom, W. W., Lyons
 Peacock, W. F., Vidalia
 Williams, Chas. D., Vidalia
 Youmans, H. D., Lyons

TRI SOCIETY

(Calhoun, Early, Miller)

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 Vice-President Hays, W. C.
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 Alternate Delegate Standifer, J. G.

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 Bridges, R. R., Leary
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 Hattaway, J. C., Edison
 Hays, W. C., Colquitt
 Houston, W. H., Colquitt
 Roberts, C. A., Leary
 Sharp, C. K., Arlington
 Shepard, W. O., Bluffton
 Standifer, J. G., Blakely
 Standifer, W. B., Blakely

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 Hadaway, W. H., LaGrange
 Harvey, C. W., Hogansville
 Herman, E. C., LaGrange
 Laue, J. E., LaGrange
 McCall, W. R., LaGrange
 McCulloh, Hugh, Jr., West Point
 McCulloh, Hugh, West Point
 Morgan, D. E., LaGrange
 O'Neal, Rance, West Point
 O'Neal, R. S., LaGrange
 Park, E. R., LaGrange
 Phillips, W. P., LaGrange
 Rutland, S. C., LaGrange
 Slack, H. R., LaGrange
 Smith, M. E., Grantville
 Taylor, J. C., LaGrange
 Williams, C. O., West Point

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 Vice-President Belflower, H. M.
 Sec'y.-Treas. Baxter, J. H.

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 Belflower, H. M., Sycamore
 Rawlins, R. D., Rebecca
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 Story, W. L., Ashburn
 Turner, W. J., Ashburn

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 Barron, H. A., Thomaston (Hon.)
 Bridges, B. L., Thomaston
 Carter, R. L., Thomaston
 Garner, J. E., Thomaston
 Harris, C. A., The Rock
 McKenzie, J. M., Thomaston
 Woodall, F. M., Thomaston

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 Vice-President Alsobrook, J. S.
 Sec'y.-Treas. Simonton, Fred H.
 Delegate Kitchens, S. B.
 Alternate Delegate Coulter, R. M.

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 Gardner, J. L., Sulphur Springs
 Hale, B. C., Rossville
 Hammond, D. W., LaFayette
 Hammond, J. H., LaFayette (Hon.)
 Hice, E. H., Rock Springs
 Hinton, A. H., Rossville
 Kitchens, S. B., LaFayette
 Middleton, D. S., Rising Fawn
 Shields, H. F., Chickamauga
 Shields, J. A., LaFayette
 Simonton, Fred H., Chickamauga
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Sec'y. Treas. Lott, W. H.
 Delegate Pirkle, J. A.
 Alt. Delegate Aycock, T. R.

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 Floyd, Chas. S., Loganville
 Lott, W. H., Monroe
 Nunnally, H. B., Monroe
 Pirkle, J. A., Monroe
 Stewart, Philip R., Monroe
 Upshaw, H. L., Social Circle
 Wells, G. R., Monroe (deceased)

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 Alternate Delegate Hafford, W. C.

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 Bagley, J. B., Waresboro
 Bradley, D. M., Waycross
 Bussell, B. R., Waycross
 Campbell, J. A., Nahunta
 Carswell, H. J., Waycross
 DeLoach, A. W., Waycross
 Dorminy, A. C., Hoboken
 Ferrell, T. J., Waycross
 Fleming, A., Folkston
 Hafford, W. C., Waycross
 Hendry, G. T., Blackshear
 Huey, H. G., Homerville
 Johnson, R. L., Waycross
 McCullough, K., Waycross
 Minchew, B. H., Waycross
 Mixon, W. D., Waycross
 Penland, J. E., Waycross
 Pomeroy, W. L., Waycross
 Reavis, W. F., Waycross
 Seaman, H. A., Waycross
 Stephens, C. M., Waycross
 Walker, R. C., Waycross
 Williams, A. D., Waycross
 Witmer, C. A., Waycross

WARREN COUNTY**Officer**

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Member

Davis, A. W., Warrenton

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 Vice-President Taylor, R. L.
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 Delegate Peacock, E. S.
 Alt. Delegate Burdett, J. R.

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 Helton, B. L., Sandersville
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 King, W. R., Tennille
 Lennard, O. D., Tennille
 Lozier, N. H., Sandersville
 Malone, Steve B., Sandersville
 Mitchell, L. C., Sandersville
 Newsom, N. J., Sandersville
 Overby, N., Sandersville
 Peacock, E. S., Harrison (deceased)
 Rawlings, F. B., Sandersville
 Rogers, O. L., Sandersville

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 Vice-President Colvin, J. T.
 Sec'y.-Treas. Gordon, A. J.
 Delegate Gordon, A. J.

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 Gordon, A. J., Jesup
 Moody, E. A., Odum
 Ogden, D. H., Odum (Hon.)
 (deceased)
 Ritch, T. G., Jesup

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 Vice-President Wood, D. Lloyd
 Sec'y.-Treas. Ault, H. J.
 Delegate Easley, Frank

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 Broadrick, G. L., Dalton
 Easley, Frank, Dalton
 Erwin, H. L., Dalton
 Greene, W. J., Ringgold
 Kennedy, B. L., Dalton
 Lacewell, J. F., Dalton (Hon.)
 McAfee, J. G., Dalton
 Rollins, J. C., Dalton
 Sams, Henry L., Dalton
 Shellhorse, E. O., Dalton
 Starr, Trammell, Dalton
 Steed, J. H., Dalton
 Wood, D. Lloyd, Dalton

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 Mitchell, Stephen R., Pineview (Hon.)

WILKES COUNTY**Members**

Ellis, L. M., Washington
 Simpson, A. W., Washington
 Wills, C. E., Washington
 Wood, O. S., Washington

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 Delegate Tipton, W. C.
 Alternate Delegate Tracy, J. L.

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 Hall, Warren J., Oakfield (Hon.)
 McCoy, H. S., Sylvester
 Sessions, W. W., Sumner (Hon.)
 Sumner, G. S., Poulan
 Tipton, W. C., Sylvester (Hon.)
 Tracy, J. L., Waverly Hill Sanatorium,
 Waverly Hill, Ky.
 Taylor, Ralph L., Davisboro
 Vickers, T. E., Wrightsville

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Austin, G. L., Pavo
 Banks, Geo. T., Fairmount
 Barrow, H. L., Powersville
 Bell, Kenneth R., Atlanta
 Bishop, L. A., Unadilla
 Blanchard, C. R., Augusta
 Boggs, H. L., DeSoto
 Bramblett, R. H., Cumming
 Brantley, T. Boykin, Hiltonia
 Bray, H. B., Wrightsville
 Bridges, R. R., Leary
 Carpenter, Geo. L., Talbotton
 Carter, C. B., Columbus
 Chambers, J. A. S., Inman
 Clower, R. J., Morven
 Cranston, W. J., Augusta
 Davis, E. B., Claxton
 Deal, B. A., Statesboro
 Dew, J. Harris, Atlanta
 Dorminy, E. J., Fitzgerald
 Downing, E. E., Newington
 DuPree, G. W., Gordon
 Ellis, L. M., Washington
 Evans, I. E., Columbus
 Ford, E. D., Ray City
 Freeman, Ralph, Hoschton
 Gostin, B. S., Macon
 Griffith, R. P., Columbus
 Harper, G. T., Dewy Rose
 Hice, E. H., Rock Springs
 Hinton, A. H., Rossville
 Holmes, W. P., Wadley
 Hudson, B. B., Columbus
 Isler, J. N., Meigs
 Jones, A. B., Jr., Quitman
 Leonard, W. P., Talbotton
 Lester, J. A., Fayetteville
 Liggin, Samuel B., Reynolds
 Mahaney, J. H., Columbus
 Mathews, J. H., Columbus
 Moye, C. G., Brewton
 Oetjen, LeRoy H., Augusta
 Olliff, H. H., Register
 Patrick, J. Z., Pulaski
 Peniston, J. B., Newnan
 Pierce, N. H., Atlanta
 Ring, L. J., Lenox
 Rose, J. R., Unadilla
 Shippey, S. H., Atlanta
 Smith, D. D., Swainsboro
 Stillman, W. K., Atlanta
 Stone, J. C., Doerun
 Styles, O. R., Bowdon
 Thompson, J. B., Columbus
 Trammell, J. R., Statham
 Waits, W. J., Gray
 Waters, L. T., Savannah
 Whitley, L. L., Crawford
 Wood, Kenneth, Leslie
 Wortham, A. G., Centralhatchee

SOUTHERN MEDICAL ASSOCIATION

(Continued from Page 461)

Dr. Edgar G. Ballenger, Dr. Omar F. Elder, and Dr. Harold P. McDonald, Atlanta, "Urological Diagnosis."

Dr. Murdock Equen, Atlanta, "Laryngeal Cancer."

Dr. Glenville Giddings, Atlanta, "Child's Sleep." (First award). The exhibit was a study of sleep in which the movements of the sleepers recorded electrically were used as an index of the character of the individual's sleep. Included in this exhibit was the effects of foods, baths, beverages, and temperature of the sleeping rooms. The display also included the effects of intensive study and intensive physical exercise on sleep, as well as the effect of fever and antipyretics. Another feature of the exhibit dealt with the effect of physical discomfort of various types on sleep. Records were plotted on graphs. The hypnograph used for collecting the data was connected to the bed so that the method of obtaining the information might be more readily seen.

Dr. Frank K. Boland, Atlanta, by invitation of the President, responded to the address of welcome at the General Public Session on Wednesday evening.

The President's address was entitled, "J. Marion Sims: An Appreciation."

The Association's Research Medal was awarded to Dr. Wm. de B. Macnider, Chapel Hill, N. C., Kenan Professor of Pharmacology, University of North Carolina, for "Original and Meritorious Research, Especially in Experimental Nephritis."

Georgia Physicians on the Program as Essayists

Dr. Hal M. Davison, Atlanta; Dr. Jas. E. Paullin, Atlanta; Dr. Glenville Giddings, Atlanta; Dr. Roy R. Kracke, Emory University; Dr. Wm. R. Houston, Augusta; Dr. Edgar F. Fincher, Jr., Atlanta; Dr. Howard Hailey, Atlanta; Drs. Edgar G. Ballenger, Omar F. Elder and Harold P. McDonald, Atlanta; Dr. Dunbar Roy, Atlanta; Dr. Murdock Equen, Atlanta, and Dr. M. A. Fort, Bainbridge.

Dr. Jack W. Jones, Atlanta, won the Washington Post Cup in the golf tournament. The first score of 85 was a tie between Dr. Jones and Dr. J. J. Gable, Norman, Okla. In the play-off Dr. Jones won with a score of 83 while Dr. Gable's score was 86.

Dues to the Medical Association of Georgia will be \$6.00 for 1934. This does not include your local society dues.

BOOK REVIEW

Local Anesthesia. By Arthur E. Hertzler, A. M., M.D., Ph.D., L.L.D., F.A.C.S., Professor of Surgery in the University of Kansas. Cloth. Price \$5.00. Pp. 292, with 148 illustrations. Fifth edition. St. Louis: C. V. Mosby Co., 1933.

A small volume containing the principles of local anesthesia and the detailed procedure of administration found of most practical value in the experience of the author. The scope of the book covering the technic of local anesthesia to every region of the body makes for much repetition and the book is not one for easy reading. As a handbook for ready reference on technic it is recommended.

For the sake of completeness chapters on spinal anesthesia and intravenous anesthesia written by co-authors respectively are included. Under "indications and contraindications" for spinal anesthesia the co-author states "Shock from traumatic injury or similar conditions does not preclude the use of spinal anesthesia if the blood pressure is raised to near the normal level by preliminary intravenous ephedrine and adrenalin injection. Patients with cardiac decompensation or valvular disease do better with spinal than with general anesthesia. Chest complications, such as tuberculosis, bronchiectasis, and acute respiratory infections that make the giving of general anesthesia dangerous, add little to the hazard of operation with spinal anesthesia." While spinal anesthesia holds an undeniable place in the realm of anesthesia the above statements as to its indications are not generally accepted. These statements are based on a personal series of two thousand cases and the results make excellent material for a paper but are out of place in a book which should only contain well-established knowledge.

EDGAR BOLING, M.D.

COMMUNICATIONS INDEPENDENT NEWSPAPER

To the Editor:

It seems fair to remind the members of the Medical Association of Georgia that the "Statesman" is a weekly publication, non-partisan and devoted to the interests of our state. Each issue contains much that is vital to us and in all medical matters it has stood squarely behind and with us, recognizing that we had the same ultimate ends in view.

We should encourage the members of our Association to subscribe the small sum of \$1.00 a year and thereby keep better posted on the affairs of our state.

DAN Y. SAGE, M.D.

Atlanta, Ga., Dec. 1, 1933.

ARTICLES ACCEPTED

To the Editor:

In addition to the articles enumerated in our letter of October 30, the following have been accepted:

Abbott Laboratories:

Abbott's Haliver Oil, Plain Capsules.

Phenobarbital Sodium—Abbott.

Lederle Laboratories, Inc.:

Gas Gangrene Antitoxin Polyvalent—Not Refined.

Antipneumococci Serum, Refined and Concentrated, Type II.

Mead Johnson & Co.:

Mead's Viosterol in Halibut Liver Oil 250-D (In Capsules).

Sharp & Dohme, Inc.:

Arizona Ash Pollen Extract—Mulford; Barnyard Grass Pollen Extract—Mulford; Birch Pollen Extract—Mulford; Chrysanthemum Pollen Extract—Mulford; Hemp Pollen Extract—Mulford; Mesquite Pollen Extract—Mulford; Papaw Pollen Extract—Mulford; Primrose Pollen Extract—Mulford; Arizona Walnut Pollen Extract—Mulford; Sycamore Pollen Extract—Mulford; Saw Grass Pollen Extract—Mulford; Sagewort Pollen Extract—Mulford; Prairie Sage Pollen Extract—Mulford; Pasture Sage Pollen Extract—Mulford.

E. R. Squibb & Sons:

Concentrated Antipneumococcus Serum Types I and II.

Diluted Diphtheria Toxoid for Reaction Test 1 cc. Ampule.

Winthrop Chemical Co., Inc.:

Luminal Sodium Solution in Ethylene Glycol.

PAUL NICHOLAS LEECH, *Secretary,*
Council on Pharmacy and Chemistry,
American Medical Association.

Chicago, Ill.

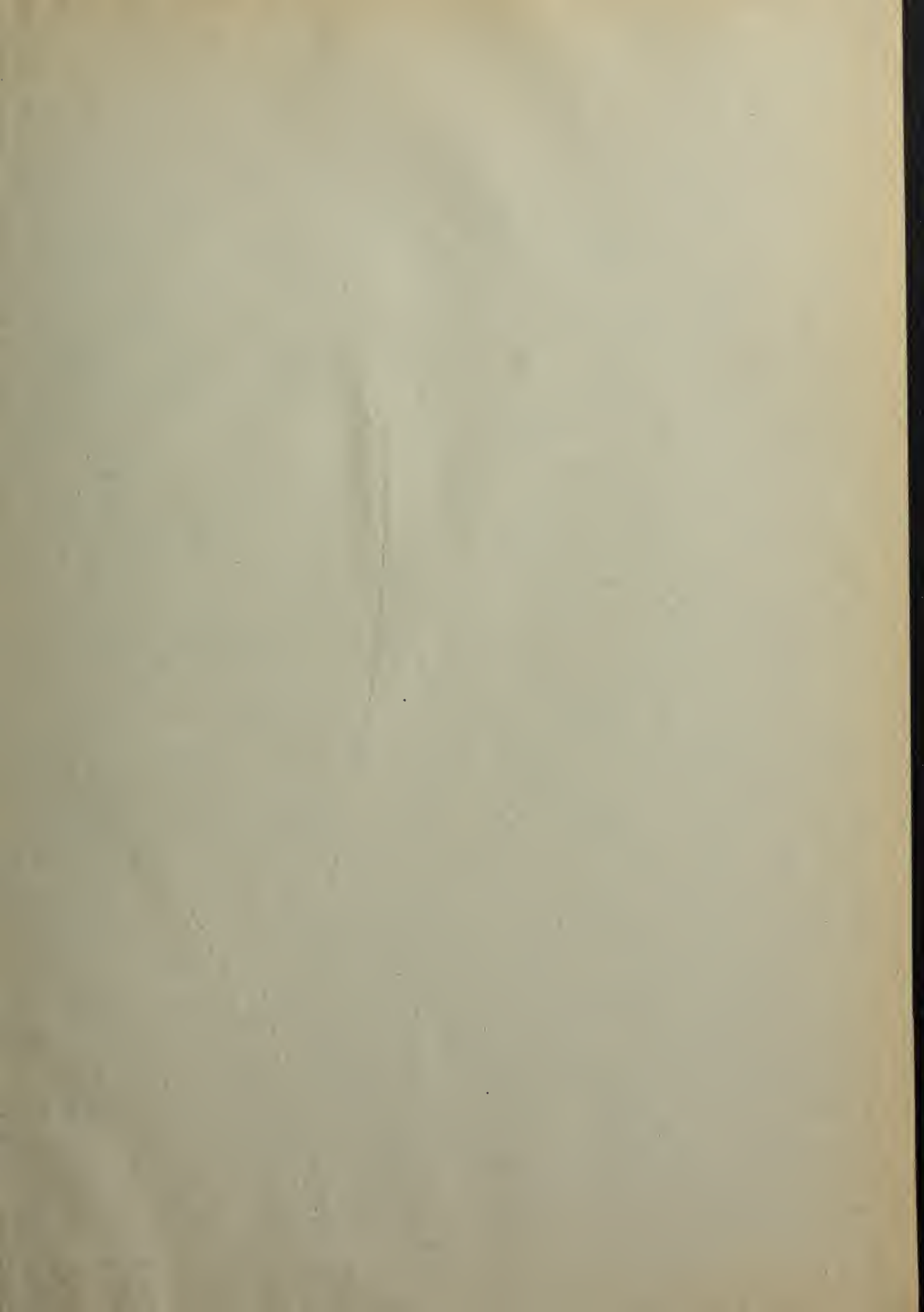
November 27, 1933.

NEW PRODUCT FOR DIPHTHERIA IMMUNIZATION

The Squibb Laboratories announce the availability of Refined Diphtheria Toxoid Alum Precipitated with the featured advantage that one injection is sufficient for the immunization of the majority of children against diphtheria. The efficacy of the preparation in immunizing against diphtheria is believed to be due to the fact that the alum precipitated toxin, since it is relatively insoluble, is more slowly absorbed and remains in the body sufficiently long to produce adequately protective amounts of antitoxin.

One injection of Alum Precipitated Toxoid is reported to be as effective as two or three injections of ordinary unprecipitated toxoid, and is also said to produce a greater number of negative Schick Tests, that is, a higher percentage of immune individuals. These features make Alum Precipitated Toxoid of particular value in public health work, for two or three times as many persons may be immunized with no more effort nor time on the part of the public health worker. It also makes it easier for the family physician to follow the advocated procedure of immunizing every infant, at whose birth he has officiated, at 6 months of age.





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